JA-SIG
Java in Administration
Special Interest Group

Collaboration: Sharing Ideas
and Sharing Solutions

Implementing Web Services-based Applications: A Discussion

Presented by Jim Farmer

at

The XML Forum Meeting

Monday, February 10, 2003

at the University of California, San Francisco

Publisher's Note

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The discussion focused on the eTranscript projects of the California Community Colleges, Florida's FACTS, and the plans of the University of Texas Austin EDI Server. The objective was convergence of the data standards now in use.

Because of limited time, only the slides on the California Community Colleges' eTranscript project were used during the luncheon discussion.

The entire presentation is reproduced here for those who are interested in the Web-services projects.

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JA-SIG Collaborative

Overview

JA-SIG Collaborative

- JA-SIG
- Web Services as an architecture
- Key Web Services projects
- California eTranscript
- Meteor Prototype and Initial Production
- Meteor Production for Financial Aid Professionals
- Emerging Enterprise Architecture
- Observations

JA-SIG

JA-SIG Collaborative

- Java In Administration Special Interest Group
  - www.ja-sig.org
- Conferences biannually
- Clearing house
  - https://www.mis4.udel.edu/JasigCH/
- Collaborative projects

Goals

JA-SIG Collaborative

The JA-SIG's goals are to:

Nurture communication of best practices, new technologies, and innovative methodologies and projects related to Java

Increase peer review, collaboration, and group discussion related to institution-developed Java administrative applications

Broaden Java technology cross-fertilization between firms and schools on both a functional and geographic basis

JA-SIG Activities

JA-SIG Collaborative

- Conferences
  - Annual conferences
    - Winter – Java Technology
    - Summer – uPortal
    - United Kingdom – JA-SIG UK
    - Europe – Portals Europe
  - Technology Training program (in conjunction with the annual conferences in North America)
- Participant Projects
- Collaborative facilities
  - Developers list
  - Portal list
  - Web site
- The JA-SIG Clearinghouse - a place on the Web to facilitate the sharing of Java components.

The uPortal Project Begins

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"Every college and university has two very valuable assets: identity/brand – e.g., Boston College name – and loyal constituents – e.g., alumni, students, parents, staff, prospective students. These assets need to be protected, and ownership and control of the institutional information portal should not be relinquished to an outside agency. One reason for reaching this conclusion is the desire to keep the portal free of commercialism. However, the more important reason is that the institutional information portal is a key ingredient in the strategic and technical framework to integrate applications and to customize the delivery of information to all constituents."

Bernard W. Gleason, "Institutional Information Portal Key to Web Application Integration," January 26, 2001

What is uPortal?

- Enterprise portal
- Framework for presenting aggregated content (channels)
- Personalization
- Role-based access control
- Open source, collaborative effort
- Java web application

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Columbia University

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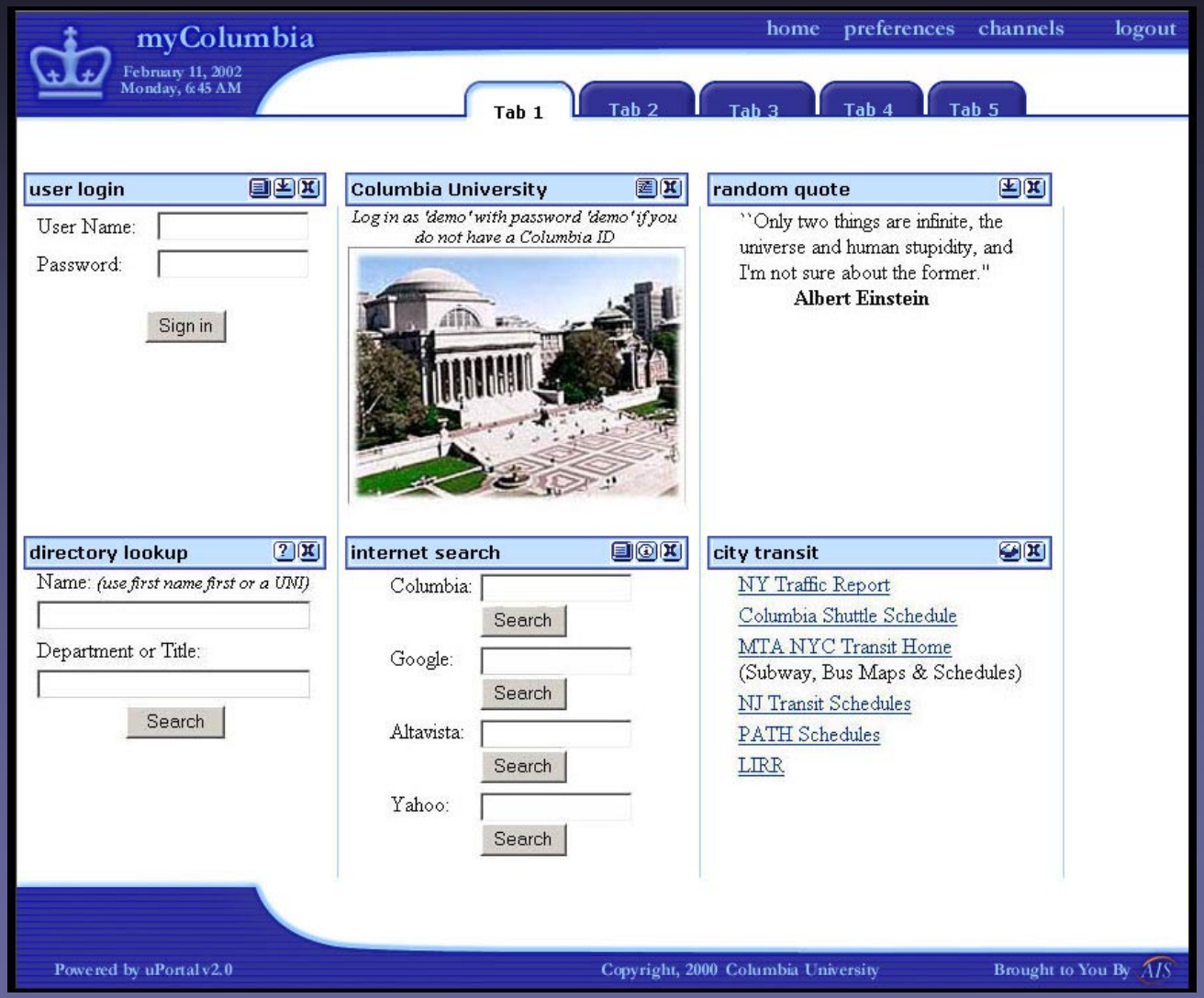

Cornell University

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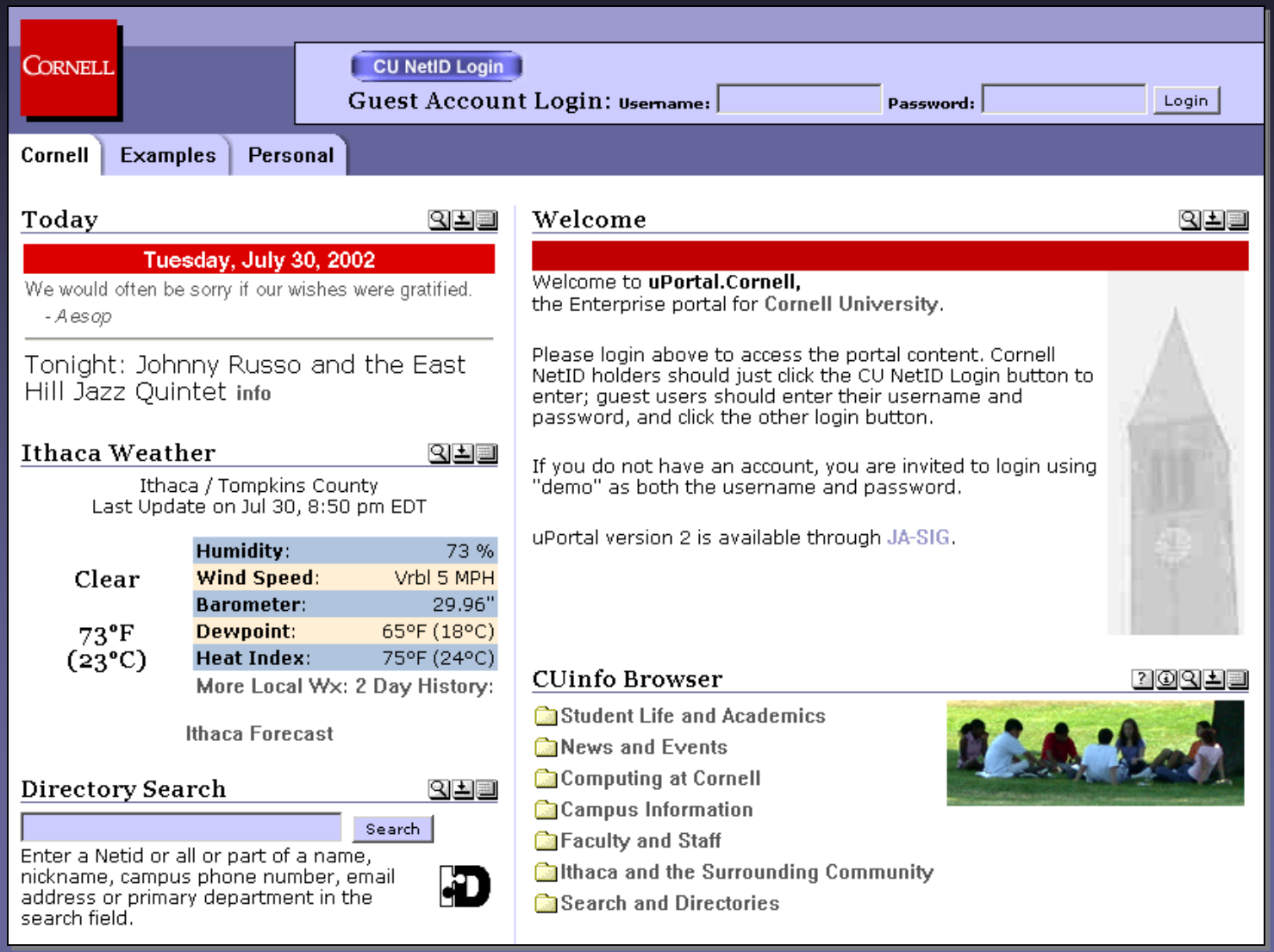

Illinois State University

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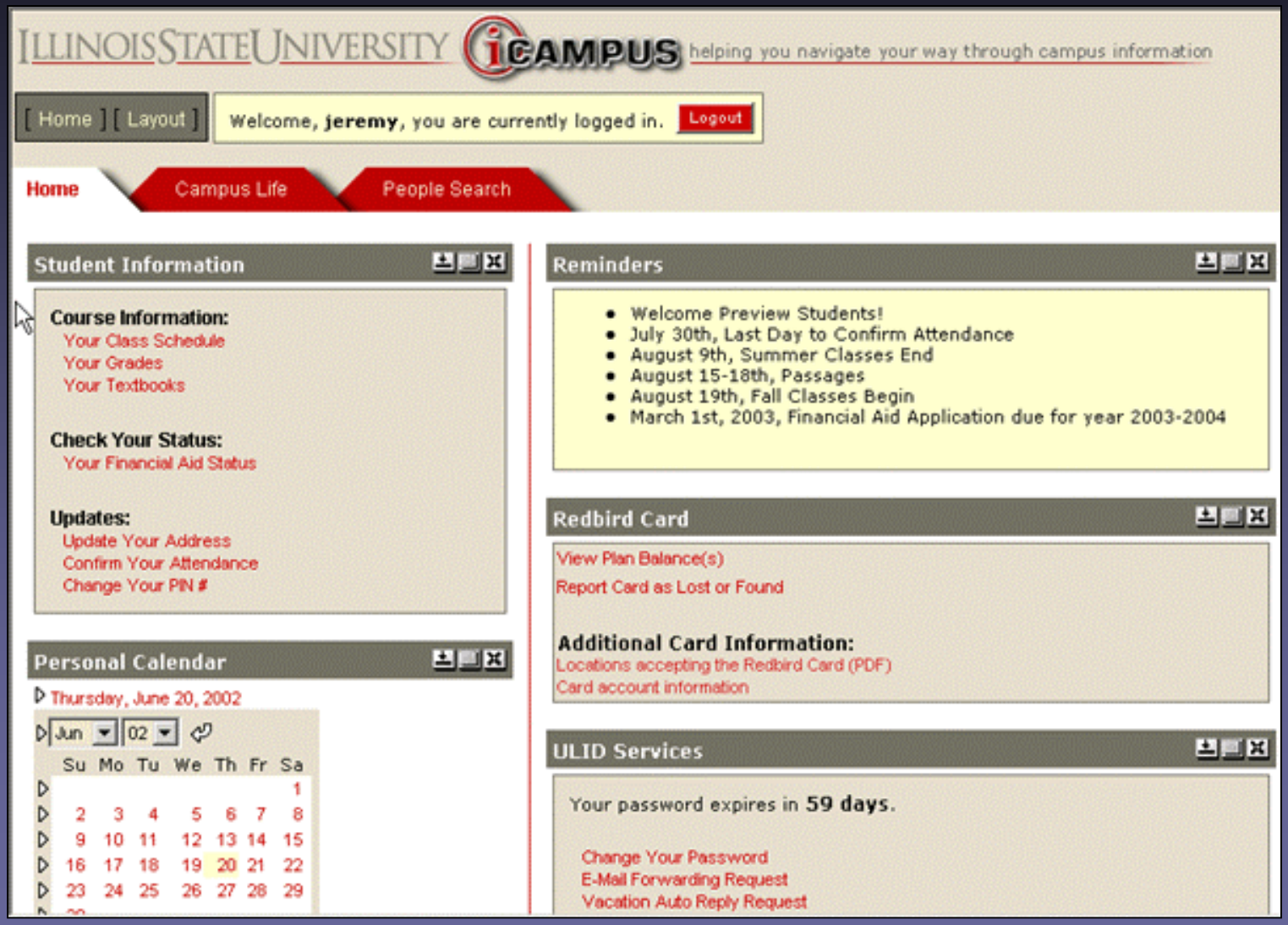


Universidad de Lima

JA-SIG Collaborative

UNIVERSIDAD DE LIMA

¡Bienvenido a Mi ULima!
Martes, Julio 30, 2002 09:05 PM
VERSION BETA

Principal

Ingresar

Usuario:

Contraseña:

Ingreso

Acerca de Mi ULima

- ¿Cómo personalizar mi ULima?
- ¿Qué es el Aula Virtual?
- Normas de Uso de Mi ULima
- Usuarios
- Requerimientos del Sistema
- Contraseña

Presentación

Mi ULima es el portal que la Universidad de Lima ha desarrollado para toda la comunidad universitaria. Tiene como objetivo proporcionar eficientemente una completa gama de servicios e información, buscando en todo momento colaborar con las actividades e intereses tanto de la comunidad universitaria como de los visitantes interesados en la Institución.

En Mi ULima encontrarás información sobre tu record académico, cuenta corriente, matrícula y cursos. También podrás acceder a servicios como Biblioteca, práctica y empleo, aulas virtuales, áreas de discusión, agendas y directorios, entre otros.

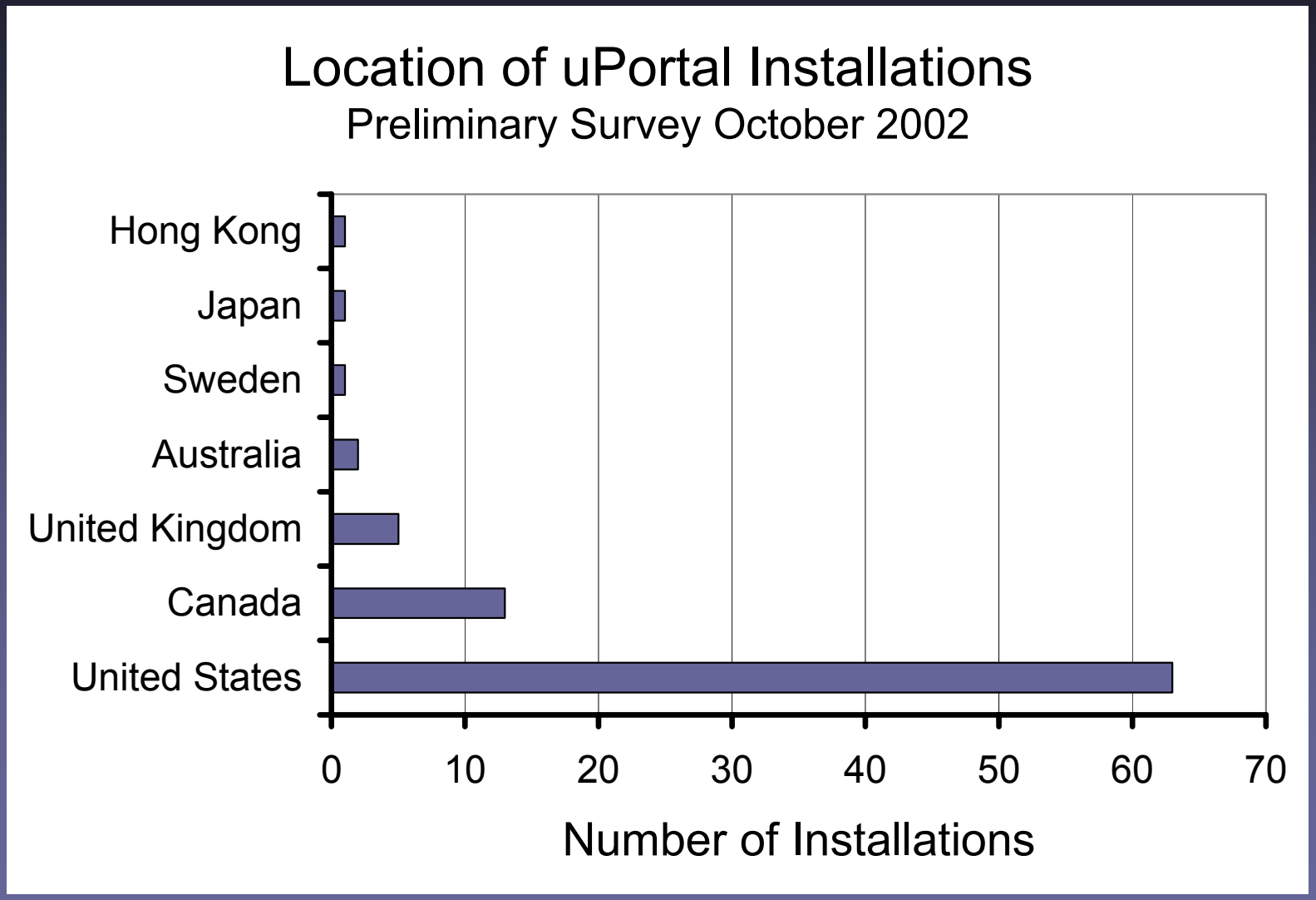
El portal está diseñado especialmente para los miembros de la comunidad a la que atiende. Bastará con que ingreses tu usuario y contraseña y Mi ULima te mostrará toda la información relevante a tus necesidades. El Portal se adaptará automáticamente a tu condición académica, las actividades que realizas, el momento del ciclo en el que estamos o la configuración personalizada que hayas elegido.

im+m uPortal Test Site

JA-SIG Collaborative

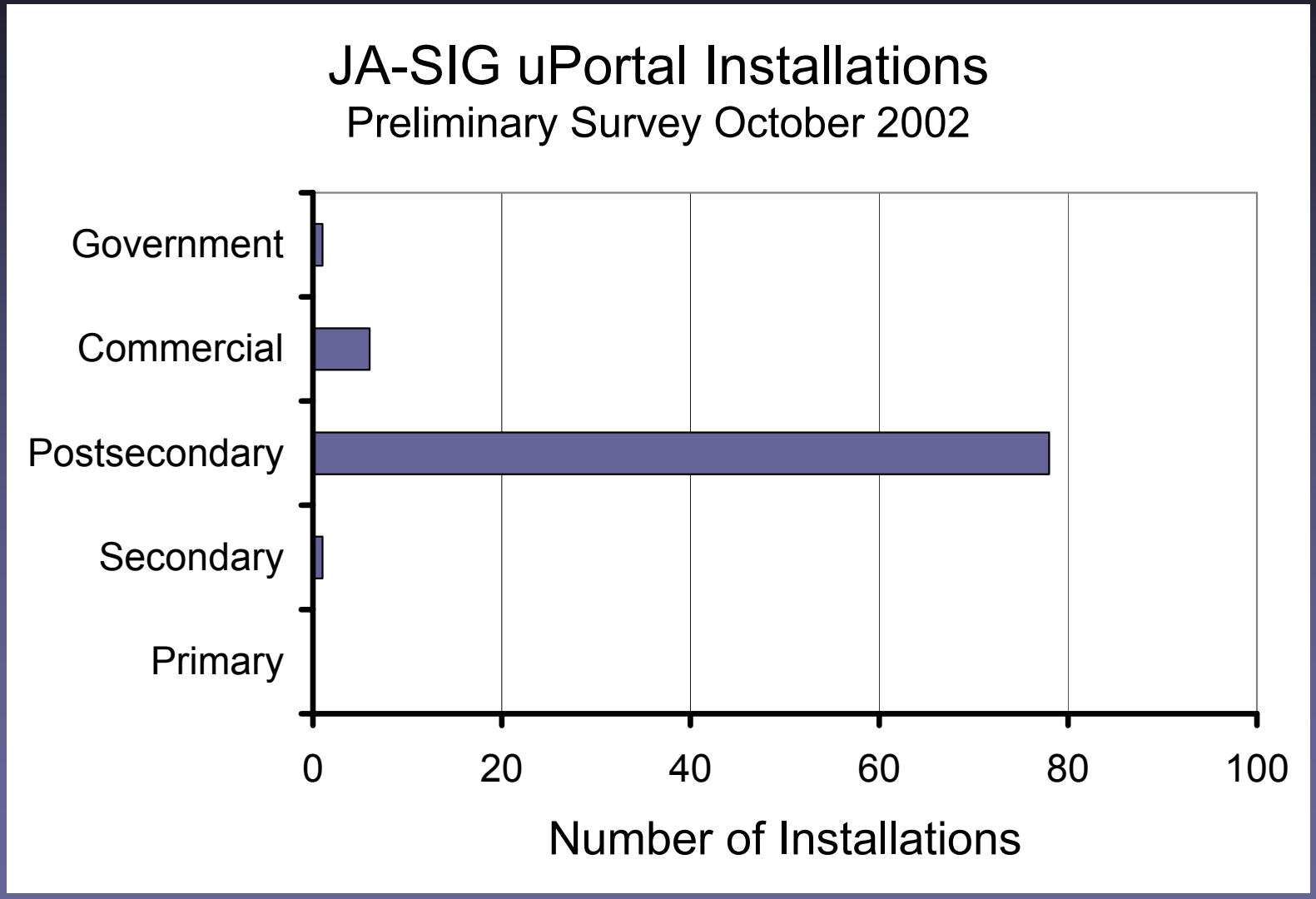
JA-SIG uPortal

JA-SIG Collaborative



JA-SIG uPortal

JA-SIG Collaborative



Some JA-SIG Members

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- Boston College
- Princeton
- UBC
- Delaware
- Florida State
- Cornell
- Boston
- Georgetown
- USC
- MIT
- Cal Poly SLO
- Mississippi State
- Brown
- Yale
- Hawaii
- Columbia
- Cornell
- U Washington
- Minnesota
- UT Austin
- + ~300 more…

JA-SIG Participant Projects [1]

JA-SIG Collaborative

- uPortal – University of Delaware*
- Content Management System – Columbia University*
- Library Catalog Access (Z39.50 2001) – Oxford University
- Security: Central Authentication System (CAS) – Yale University
- Security: Athens and Shibboleth – University of Hull
- WSRP (Web Services Remote Portal) Compliance – Interactive Business Solutions and Unicon, Inc.*
- RSS 1.0 + Modules – instructional media + magic, inc.*

JA-SIG Participant Projects [2]

- Meteor Student Loan Information Prototype – National Council of Higher Education Loan Programs
- eTranscript exchange – California community colleges
- eMail – University of British Columbia
- Web proxy – Memorial University of Newfoundland

Note: The projects listed are available as uPortal channels (portlets). Because of open standards, they also can be used by for other standards-compliant portals and, with adaption, installed on traditional Web pages.

This list does not include commercial portlets (channels) for uPortal such as those of Interactive Business Solutions, or products that have been adapted locally.

*Projects contributing to the uPortal framework as well.

JA-SIG, The Reality

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- Several hundred programmers working collaboratively at more than 100 colleges and universities on projects important to higher education.
- A community that shares knowledge and experience; resolving problems, sharing design suggestions, and testing and improving each others work.
- IT managers who are working aggressively to make the most effective use of available resources.
- And, with a converging perspective on enterprise architecture, representing a substantial part of higher education in discussions of new and changed systems, especially those that share information in real-time.

JA-SIG, The Future

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- Projects, such as uPortal, that advance the use of open-standards as well as serve the colleges and universities.
  - Support of such efforts as WS-Interoperability, Liberty Alliance, W3C and OASIS by implementing the standards at a number of colleges and universities.
  - Make available to developers recommendations on available standards and their applicability to higher education. Coordinate with other groups such as HEKATE.
  - Evolve an enterprise application integration strategy, based on Web services, and demonstrate its feasibility and effectiveness

JA-SIG, The Future

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- In conjunction with the Joint Information Systems Committee, implement standards, such as IMS, that facilitate the exchange of learning objects across national boundaries.
- Recognize and encourage the internationalization of software serving higher education.
  - Create an international version of uPortal. (Efforts now underway for Celtic, Chinese, English, French, Japanese, Russian, Spanish, Swedish, Vietnamese, and Welsh).
  - Demonstrate the use of the XLIFF standard in developing multiple-languages portlets (channels).

JA-SIG, The Future

JA-SIG Collaborative

- Encourage the adoption of information technologies that meet the diverse needs of higher education, especially Java, XSLT, and Web Services
  - Continue the JA-SIG NA training program
  - Facilitate the exchange of experience and expertise
  - Demonstrate by example implementation, the effectiveness of these technologies
  - Communicate the experience within the community and to others

Web services as an architecture

Web services defined

"Web services are a set of standards for how systems connect to each other, and communicate information. It's an extension of a distributed computing framework, which provides an open standard that most software vendors support."

Chandra Vekatapath
Market Manager, Web Services, IBM Corporation,
TheBusiness Integrator, Second Quarter 2002, pp. 5-11

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Value of Web services technology

Open standards Web service projects are taking one-fourth the time and costing one-fifth comparable projects using traditional technology. Performance is 2 to 10 times better than expected.

- HFC Bank - IFX credit card application using XML, SOAP and XSLT
- Deutsche Bank Bauspar - FixML security transaction integration using XML messages and XSL transformations
- Hypo Vereinsbank - Integration

Based on presentations at the
XSLT [Invitational] Conference
Oxford, University, April 8-9, 2001

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"Best of Breed" strategy

"With Web services, best of breed becomes more feasible."

"Web services will make best of breed more cost effective."

Rick Bergquist, CTO of PeopleSoft
as quoted by Heather Harreld and Mark Jones in
"Chasing suite success," InfoWorld, Nr. 24, June 17, 2002.

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Web services architecture is

- XML "tagged" data content
  - eXtensible Markup Language
- ebXML/SOAP data transport
  - Simple Object Access Protocol
- XSL transformations for presentation
  - eXtensible stylesheet language

and now

- UDDI/WSDL directory services
  - Universal Description, Discovery, and Integration, and Web Services Description Language

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A Web service is

- XML business messages
- using ebXML/SOAP compliant data transport
- rendered using XSL transformations
- for a remotely authenticated user

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The standards

• Data	XML
• Validation	Schema
• Transport	SOAP (real-time)
	SMTP (batch)
• Security	SAML
• Description	WSDL
• Directory	UDDI
• Transformation	XSLT

Note: Message content is not defined by any of these standards.

XML "family"

- XHTML
- XLink, XPath, XPointer
- XForms
- XSL, XSLT
- XML Signature, XML Encryption, XML Key Management
- XML Query
- XML Schema
- RDF Metadata

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Web Services Standards

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Standard	Source	Date Available
SOAP 1.1	W3C Note	8 May 2000
WSDL 1.1	W3C Note	15 Mar 2001
UDDI 2.0	OASIS	19 Jul 2002
WS-Security	OASIS	12 Dec 2002
SAML 1.1	OASIS	31 May 2002
WS-Routing	Microsoft	16 Oct 2001
WS-Reliability	Sun et al	8 Jan 2003

Industry content standards

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Industry	Standards
Financial Services Financial Reporting	ebXML compliant IFX XBRL
Student loans Financial aid	CommonLine XML Common Record
Human Resources	HR-XML
Academic Records	PESC and California Community Colleges
Library	(In discussion)

Process content standards

Function	Standard
Work flow	WSFL and WfML
Remote Portlet	WSRP
Presentation	WSUI
Security Assertions Security Access Control	SAML XACML

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Web services in higher education

- Digital library search and retrieval (Columbia, Cornell)
- Transcripts (California Community Colleges, Florida, Texas, Arizona, Ohio)
- Student Aid (NCHELP, U.S. Department of Education)
- Security (Internet 2 Shibboleth)
- Remote Portals (JA-SIG)

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Defining projects

- eTranscript and eAdmissions
  - California Community Colleges
  - Florida FACTS
  - University of Texas, Austin Internet Server
- NCHELP Meteor Financial Aid Information
- IFX Financial Services (infiNet)
- JISC (UK) Inter-system Integration

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Gleason's "Transitive Trust"

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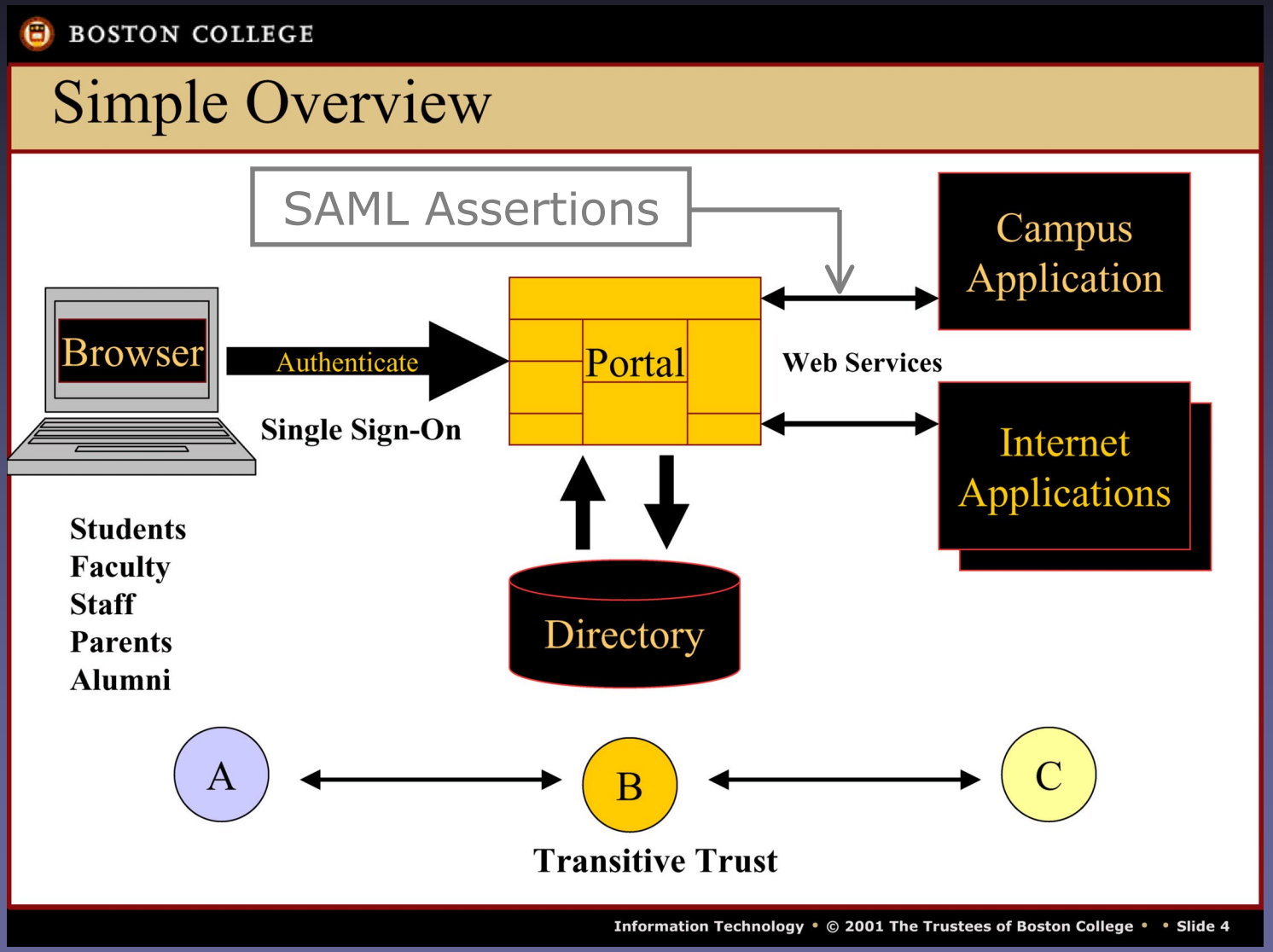
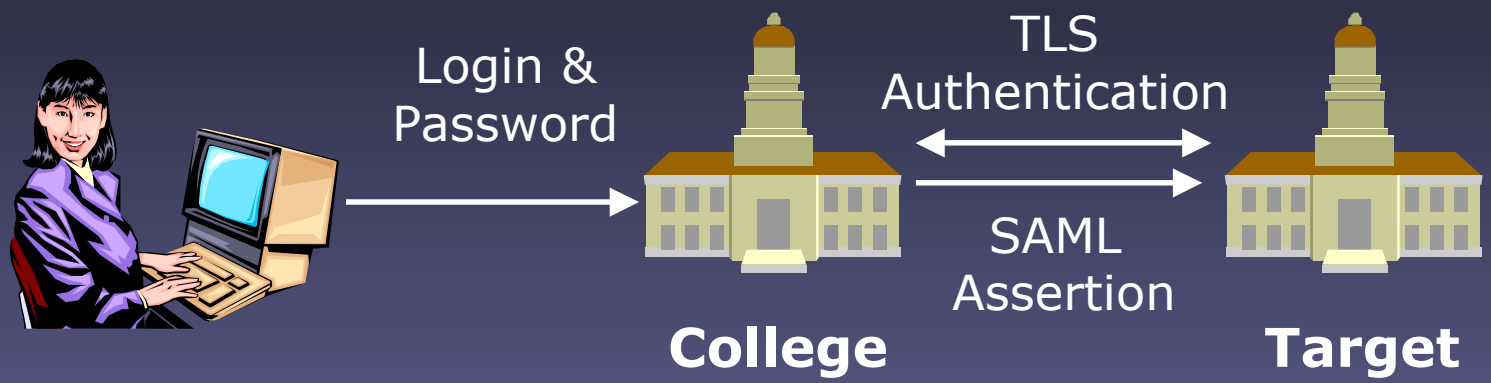


Authentication and authorization

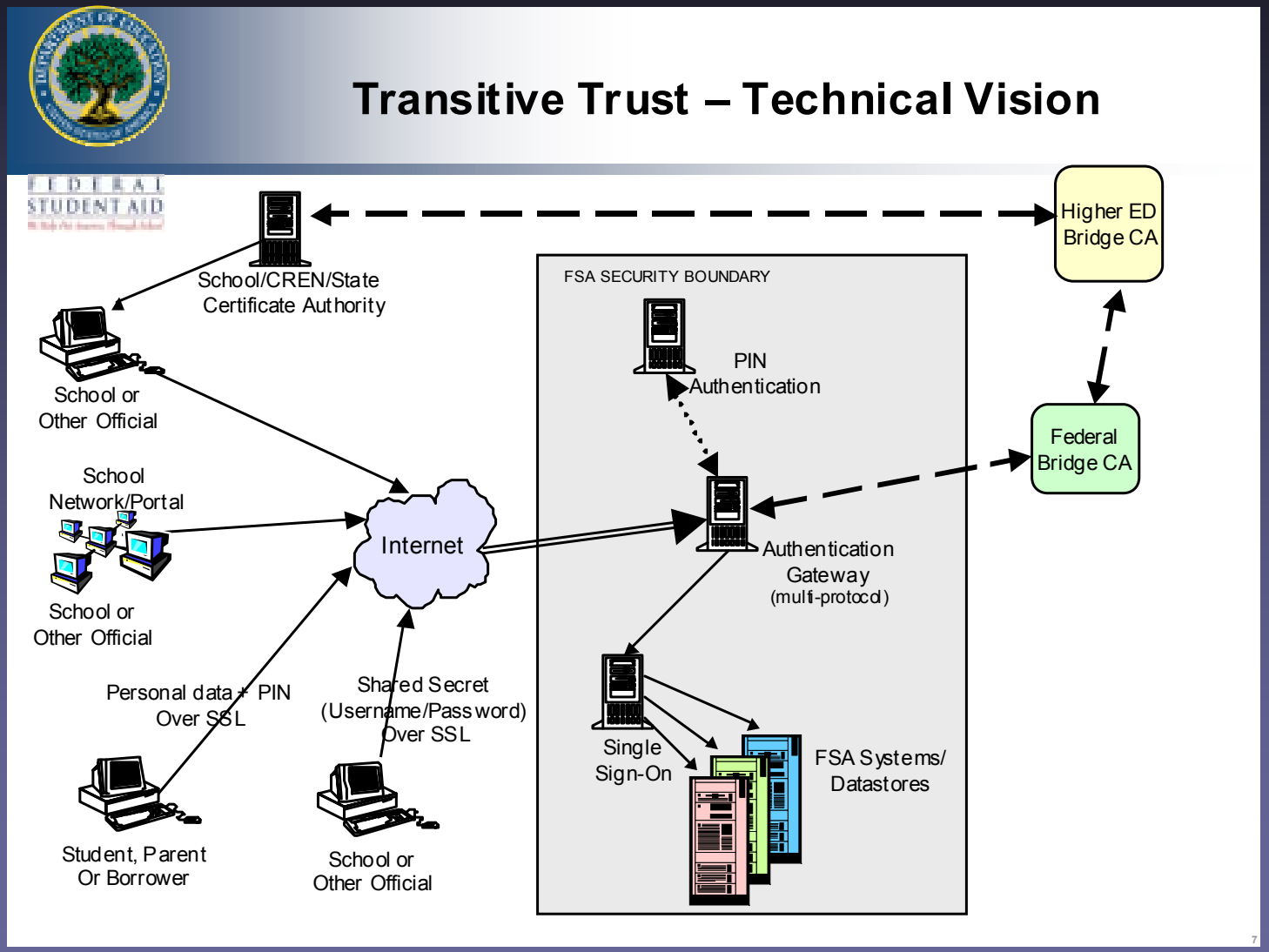


ebXML Security Profile 3

Non-persistent confidentiality and non-persistent authentication

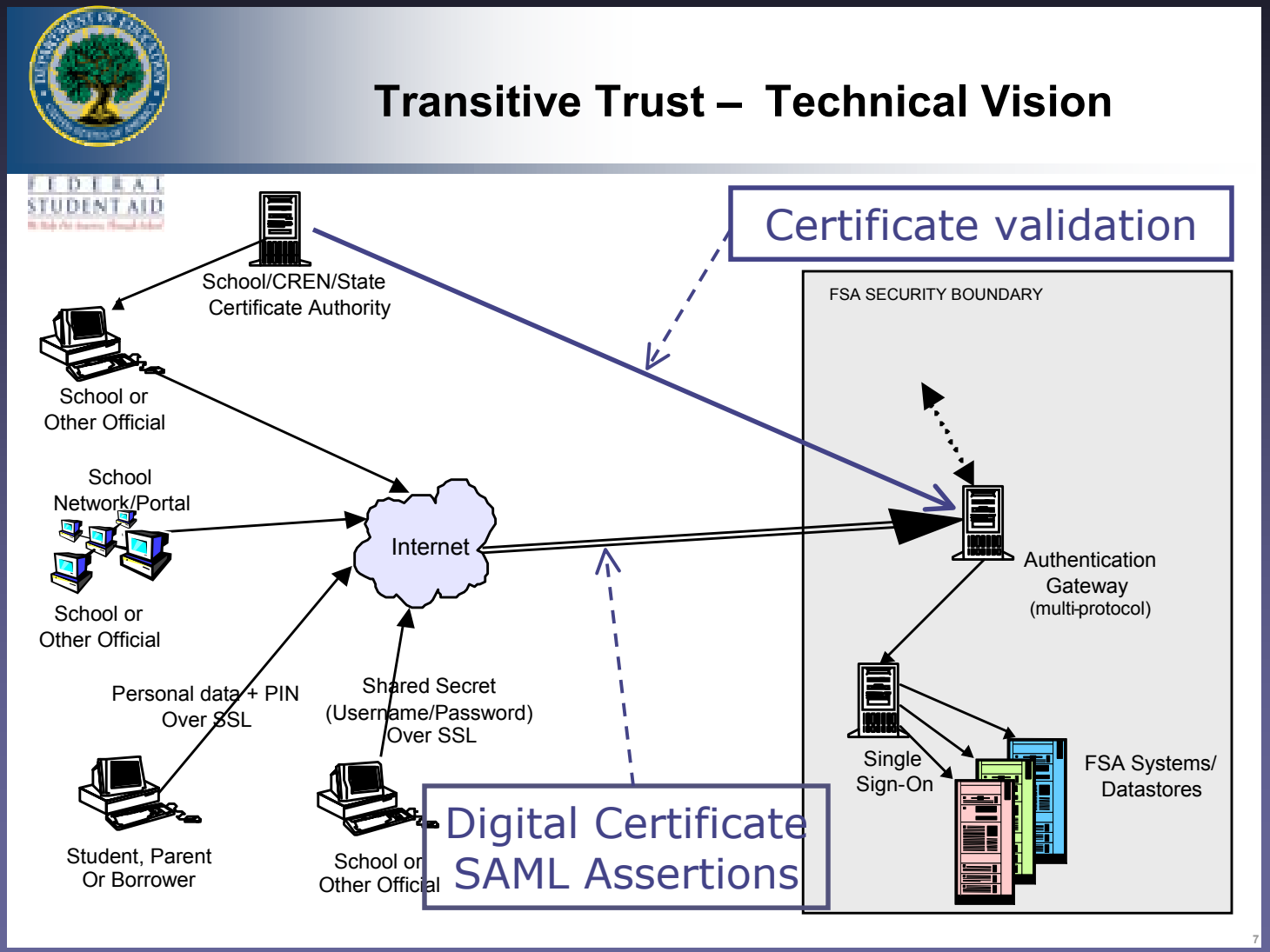
ED/FSA "Transitive Trust"

JA-SIG Collaborative



ED/FSA "Transitive Trust"

JA-SIG Collaborative



Andy Boots, FSA CIO Technology Update, May 8, 2002

Key Web-Services projects

excerpts from the
Postsecondary Electronic Standards Conference
9-10 May 2002

INTERNET EDI SERVER

Bruce Marton
Sr. Systems Analyst
The University of Texas at Austin

Why build the EDI Server

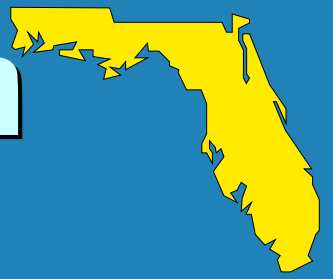
- Simple yet secure way to send SPEEDE/ ExPRESS transcripts via the Internet
- How to transport
  - FTP — File transfer protocol
  - Email with attachments — SMTP protocol
  - Value Added Network — or the Internet

Electronic transcripts exchanged via SPEEDE ANS EDI standard using the Austin EDI Server

National Initiatives

- AACRO support of the server
- International Interest
- XML support

Pioneering of Electronic Standards in Florida



Postsecondary Electronic Standards Council

May 9, 2002

By Tom Stewart

Miami-Dade Community College

Overview of Standards Activity in Florida

- Common Paper Transcript
- Common Course Numbering
- FASTER/SPEEDE
- Florida Academic Counseling and Tracking for Students (FACTS)

FASTER

Florida Automated System for Transferring Educational Records

- History of Development in early 1980's
- Proprietary Format (Fixed Length Records)
- One format for Postsecondary
- One format for K-12 to K-12
- One format for Secondary to Postsecondary
- Requests is a feature

FASTER

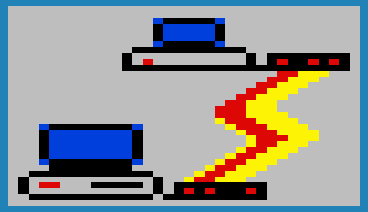
- Decision has been made by the state FASTER committee to continue converting from FASTER format to ANSI ASC X12 (SPEEDE/ExPRESS) format

- No firm target date for this conversion

Florida Academic Counseling & Tracking for Students (FACTS)

- Uses each transfer institution's Degree Audit program
- Accesses each home institution's transcript on-line via EDI with a standard EDI format (not SPEEDE)

FACTS Transmissions

- 

  Transcript information sent in FASTER EDI format

- Admissions application info sent in XML format

Future FACTS Features

- Standard XML/HTML Format for all Degree Audit Displays

Miami University of Ohio has suggested an XML-based degree audit program data exchange to the XML Forum

- Standard Transient Form

- For High School Students
  - High School Planner
  - Info on state scholarship programs
  - Costs to attend each CC and University
  - Admissions Policies and Procedures

Electronic Services from a School's Perspective

PESC Annual Conference on Standards in Higher Education

Judith Nemerovski Flink
Director of Student Financial Services (SFS)
University of Illinois at Chicago
May 9, 2002

UIC University of Illinois at Chicago

On-line Web Service Utilization

One of the primary modules of use is a web-based program, QuikChek™ that provides a suite of financial self-service applications that students can access without operator intervention. Two of these applications are:

- **ACH-Direct Deposit**
- ***ui*-pay**

What is ACH?

Automated Clearing House (ACH) is an electronic method of transferring credits and debits between financial institutions more commonly known as Direct Deposit.

What is *ui*-pay?

***ui*-pay** is a web-based payment method for students to pay their student account bills over the Web using a credit card, debit card, or electronic check from a checking or savings account.

In addition to making payments, students may also:

- **View their online account history, and**
- **Authorize other individuals, such as parents or guardians, to view their bill and pay all or part of the balance due.**

E-commerce Industry Standard Practices

For e-commerce the University utilizes:

- E-commerce industry standard practices such as: data encryption, firewalls, and strong software and physical security
- Banking standards for data transmission to the bank

Software supplier infiNET Solutions is prepared to support the banking industry's IFX standard for these applications

www.infinet-inc.com

Web Services – What are they?

- Modular software components wrapped inside a specific set of Internet communication protocols
- The Web Service Promise
  - Anyone, anywhere, any time, using any computer system can use them.

Confidential - Property of *infiNET Integrated Solutions, Inc.*

infiNET Solutions
Make the Connection

Web Services – Protocols

- XML
  - Structured information
- WSDL (Web Services Description Language)
  - Describes the Web Service
- UDDI (Universal Description, Discovery and Integration)
  - Searchable directory of Web Services
- SOAP (Simple Object Access Protocol)
  - Underlying protocol

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SAML – The Security Solution

- SAML
  - Security Assertion Markup Language
  - An XML based standard for authentication and authorization
- SAML is being driven by OASIS

  (Organization for the Advancement of Structured Information Standards)

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Make the Connection

Making it all work

- *infiNET Solutions* has partnered with JA-SIG to pilot Web Services and SAML on the Boston College campus
- These technologies are powerful, however they require the appropriate planning and architecting

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infiNET Solutions
Make the Connection

Standards in Distance Education

S

May 10, 2002
Les Smith, SCT
lsmith@sct.com

SCT Use of IMS Enterprise Spec

- **America's Learning Exchange**
  SCT produces an XML extract file of C*ourse Catalog data* to the U.S. Department of Labor to support the American's Learning Exchange (ALX project)

- **WebCT Campus Edition**
  SCT produces XML extract files and xml event messages (for real-time transmission) to synchronize data with the WebCT 3.5 Campus Edition.

  WebCT produces XML event message which are sent to the SCT administrative system to post grades

JISC recommends Web services messages to integrate administrative systems and virtual learning environment

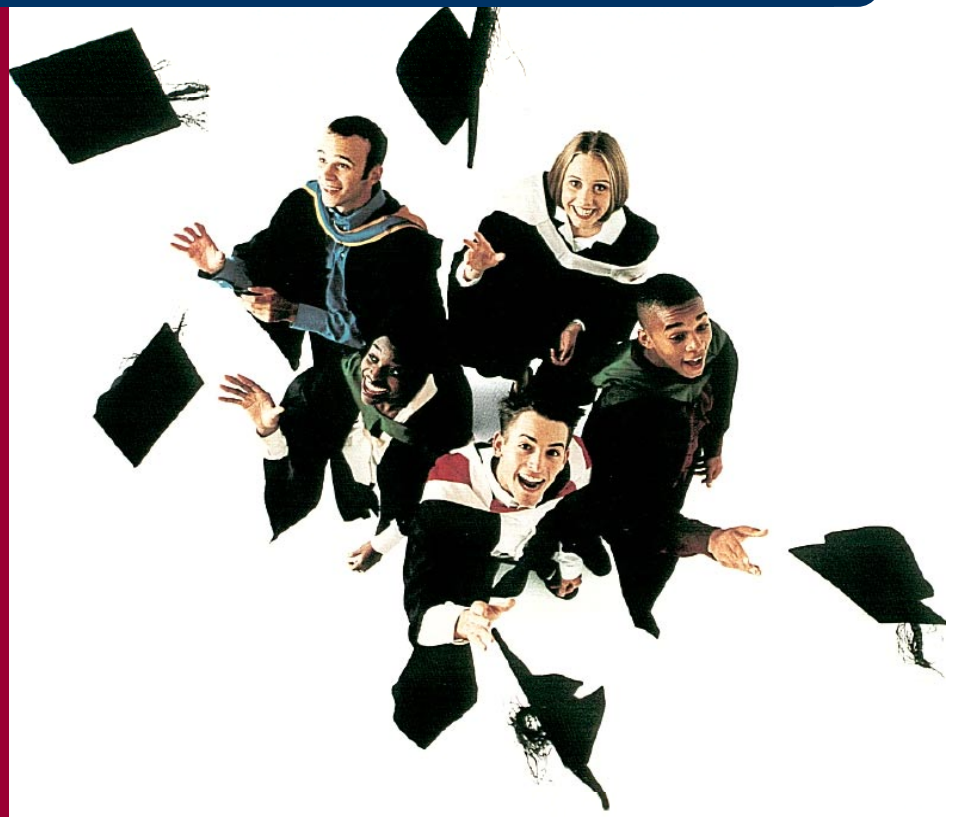
NCHELP Collaborations

Tim Cameron

NCHELP

Adele Marsh

American Education Services

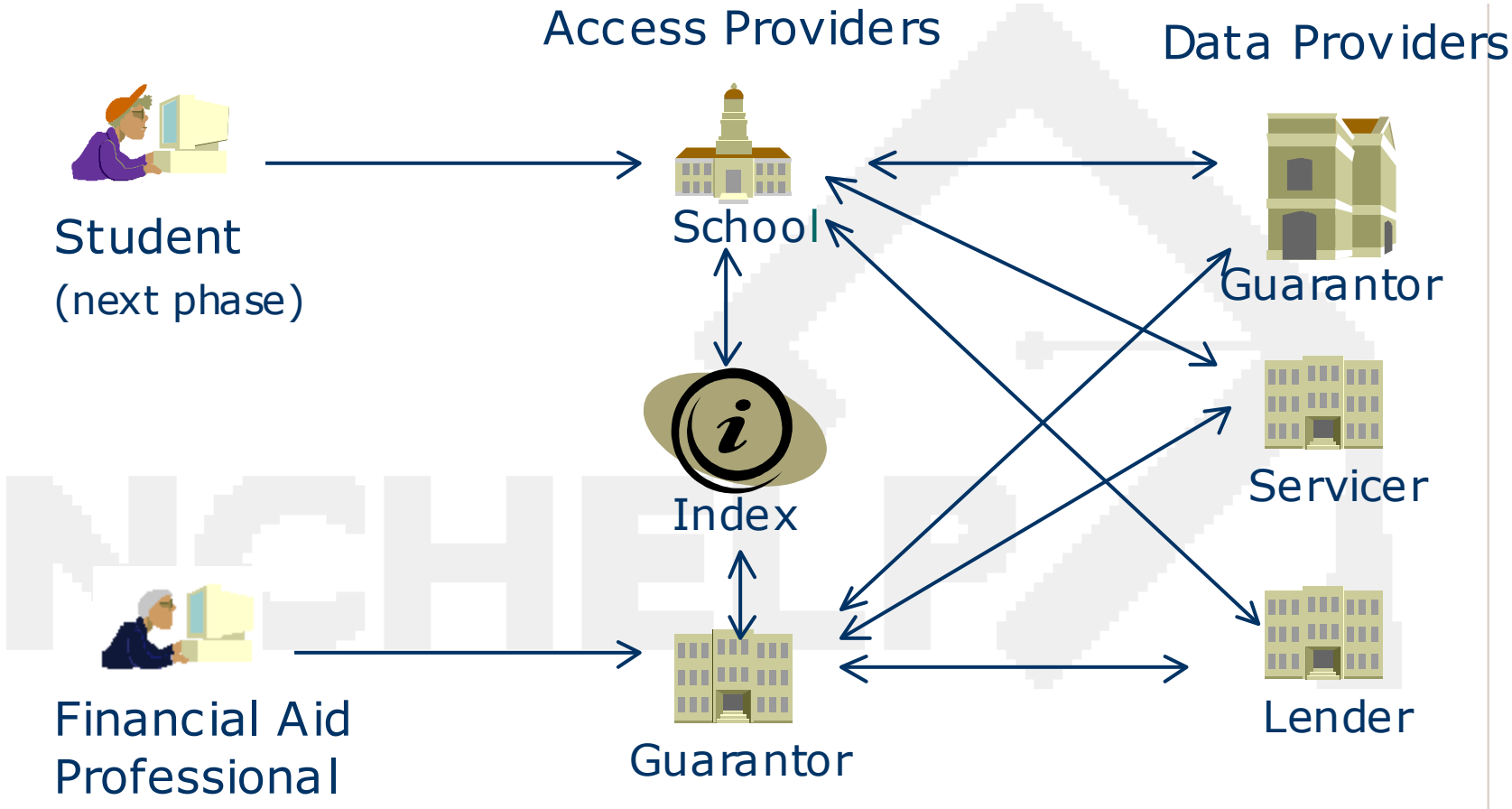


The High Performance Channel

- Transmits Data over HTTPS
  - Simple Object Access Protocol (SOAP)
  - Server-side and Client-side Software Components
- Real-Time Internet Based Processing
- Available Under the GPL

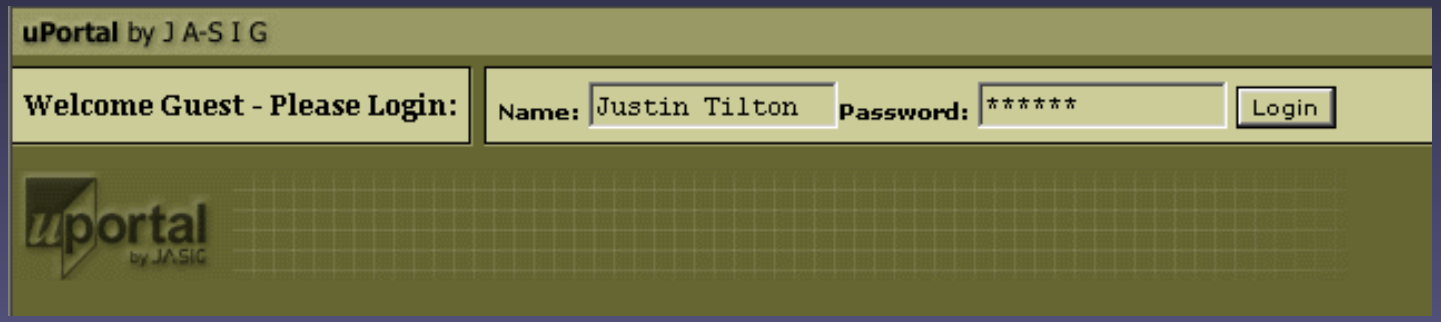
Forthcoming Version 2 is expected to implement Web services standards not available when Version 1 was developed.

Simplified Meteor Illustration



California eTranscript Prototype

e-Transcript: User Login



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Get Student List

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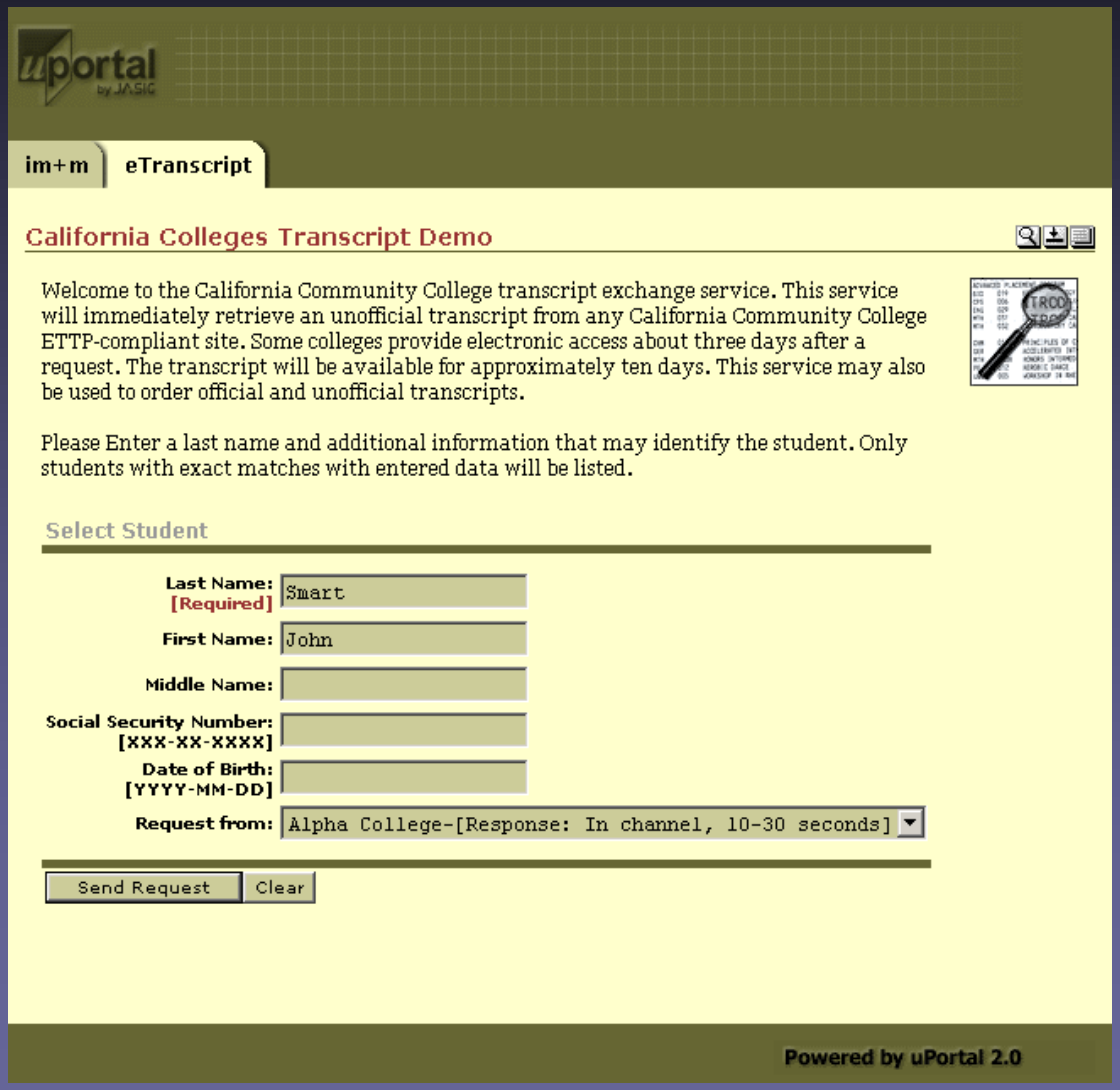

Select Student from List

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Select Transcript View

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eTranscript

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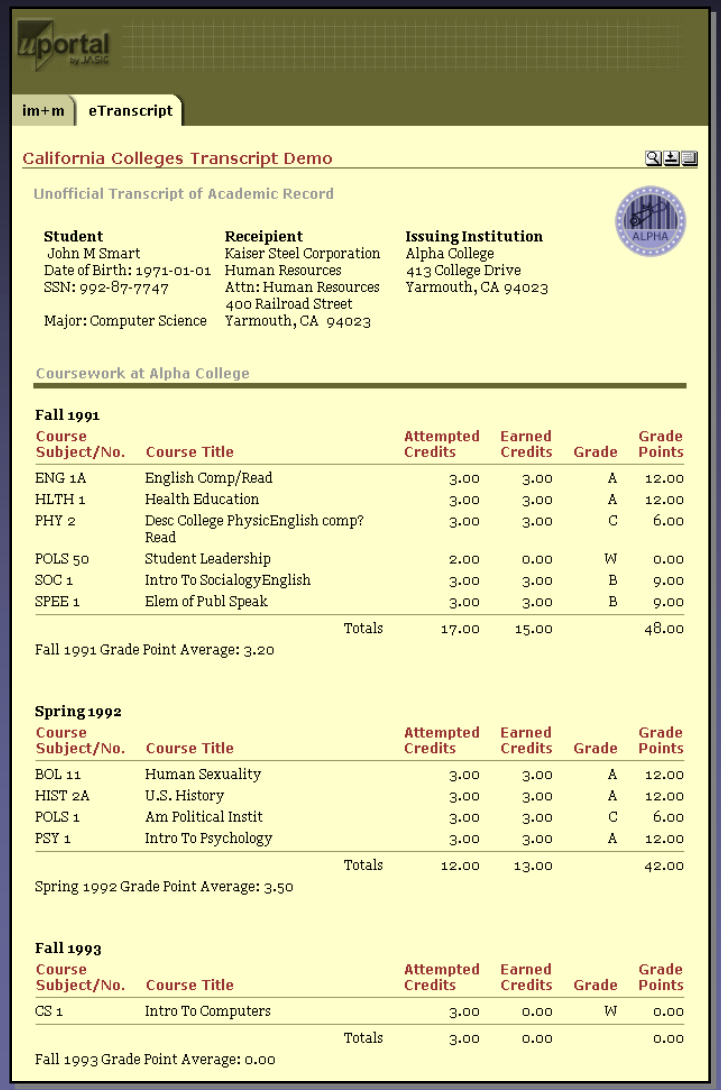


uportal by JA-SIG

im+m | eTranscript

California Colleges Transcript Demo

Unofficial Transcript of Academic Record

Student
John M Smart
Date of Birth: 1971-01-01
SSN: 992-87-7747
Major: Computer Science

Receipient
Kaiser Steel Corporation
Human Resources
Attn: Human Resources
400 Railroad Street
Yarmouth, CA 94023

Issuing Institution
Alpha College
413 College Drive
Yarmouth, CA 94023

Coursework at Alpha College

Fall 1991

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
ENG 1A	English Comp/Read	3.00	3.00	A	12.00
HLTH 1	Health Education	3.00	3.00	A	12.00
PHY 2	Desc College PhysicEnglish comp? Read	3.00	3.00	C	6.00
POLS 50	Student Leadership	2.00	0.00	W	0.00
SOC 1	Intro To SocialogyEnglish	3.00	3.00	B	9.00
SPEE 1	Elem of Publ Speak	3.00	3.00	B	9.00
	Totals	17.00	15.00		48.00

Fall 1991 Grade Point Average: 3.20

Spring 1992

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
BOL 11	Human Sexuality	3.00	3.00	A	12.00
HIST 2A	U.S. History	3.00	3.00	A	12.00
POLS 1	Am Political Instit	3.00	3.00	C	6.00
PSY 1	Intro To Psychology	3.00	3.00	A	12.00
	Totals	12.00	13.00		42.00

Spring 1992 Grade Point Average: 3.50

Fall 1993

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
CS 1	Intro To Computers	3.00	0.00	W	0.00
	Totals	3.00	0.00		0.00

Fall 1993 Grade Point Average: 0.00

Spring 1995

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
HST 1B	Western Civilization	3.00	0.00	F	0.00
PHYE 46	Tai Ji Quan	0.50	0.50	B	1.50
PHYE 46	Tai Ji Quan	0.50	0.50	D	0.50
	Totals	1.00	1.00		2.00

Spring 1995 Grade Point Average: 2.00

Summer 1996

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
PSYC 3	Personal Psychology	3.00	3.00	A	12.00
	Totals	3.00	3.00		12.00

Summer 1996 Grade Point Average: 4.00

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
HIST 1A	Survey of Western Civilization	3.00	3.00	A	12.00
HUMA 5	Multi-Cultural Mythology	3.00	3.00	A	12.00
PSYC 2	Develop Psychology	3.00	3.00	A	12.00
PSYC 5	Intro Career/Life Planning	3.00	3.00	A	12.00
SPAN 1A	Beginning Spanish	4.00	4.00	A	16.00
	Totals	16.00	16.00		64.00

Fall 1996 Grade Point Average: 4.00

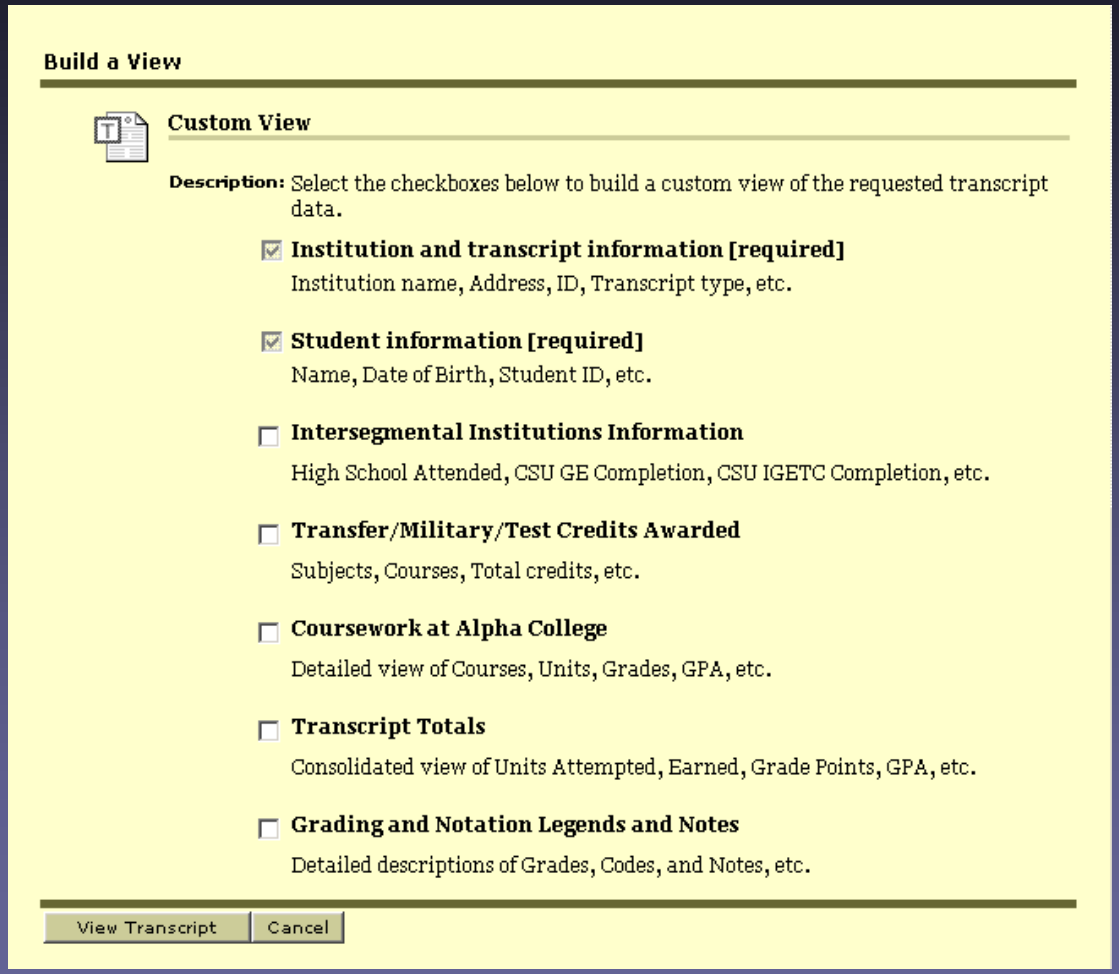
Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
BIOL 2	Concepts in Biology	4.00	4.00	B	12.00
ENGL 1B	Introduction to Literature	3.00	3.00	A	12.00
ENGL 1C	Critical Thinking and Comp	3.00	3.00	A	12.00
MATH 3	College Algebra	3.00	3.00	A	12.00
SPAN 1B	Elementary Spanish	4.00	4.00	A	16.00
	Totals	17.00	17.00		64.00

Spring 1997 Grade Point Average: 3.76

Transcript Totals

Description	Attempted Credits	Earned Credits	Grade Points	GPA
Total Institution		64.00	64.00	3.62
Total Transfer		0.00	0.00	0.00
Overall		64.00	64.00	3.62

Or Build Custom View



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Get Transcript

JA-SIG Collaborative

uportal by JA-SIG

im+m | eTranscript

California Colleges Transcript Demo

Unofficial Transcript of Academic Record

Student
John M Smart
Date of Birth: 1971-01-01
SSN: 992-87-7747
Major: Computer Science

Receipient
Kaiser Steel Corporation
Human Resources
Attn: Human Resources
400 Railroad Street
Yarmouth, CA 94023

Issuing Institution
Alpha College
413 College Drive
Yarmouth, CA 94023

Coursework at Alpha College

Fall 1991

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
ENG 1A	English Comp/Read	3.00	3.00	A	12.00
HLTH 1	Health Education	3.00	3.00	A	12.00
PHY 2	Desc College PhysicEnglish comp? Read	3.00	3.00	C	6.00
POLS 50	Student Leadership	2.00	0.00	W	0.00
SOC 1	Intro To SocialogyEnglish	3.00	3.00	B	9.00
SPEE 1	Elem of Publ Speak	3.00	3.00	B	9.00
	Totals	17.00	15.00		48.00

Fall 1991 Grade Point Average: 3.20

Spring 1992

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
BOL 11	Human Sexuality	3.00	3.00	A	12.00
HIST 2A	U.S. History	3.00	3.00	A	12.00
POLS 1	Am Political Instit	3.00	3.00	C	6.00
PSY 1	Intro To Psychology	3.00	3.00	A	12.00
	Totals	12.00	13.00		42.00

Spring 1992 Grade Point Average: 3.50

Fall 1993

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
CS 1	Intro To Computers	3.00	0.00	W	0.00
	Totals	3.00	0.00		0.00

Fall 1993 Grade Point Average: 0.00

Spring 1995

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
HST 1B	Western Civilization	3.00	0.00	F	0.00
PHYE 46	Tai Ji Quan	0.50	0.50	B	1.50
PHYE 46	Tai Ji Quan	0.50	0.50	D	0.50
	Totals	1.00	1.00		2.00

Spring 1995 Grade Point Average: 2.00

Summer 1996

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
PSYC 3	Personal Psychology	3.00	3.00	A	12.00
	Totals	3.00	3.00		12.00

Summer 1996 Grade Point Average: 4.00

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
HIST 1A	Survey of Western Civilization	3.00	3.00	A	12.00
HUMA 5	Multi-Cultural Mythology	3.00	3.00	A	12.00
PSYC 2	Develop Psychology	3.00	3.00	A	12.00
PSYC 5	Intro Career/Life Planning	3.00	3.00	A	12.00
SPAN 1A	Beginning Spanish	4.00	4.00	A	16.00
	Totals	16.00	16.00		64.00

Fall 1996 Grade Point Average: 4.00

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
BIOL 2	Concepts in Biology	4.00	4.00	B	12.00
ENGL 1B	Introduction to Literature	3.00	3.00	A	12.00
ENGL 1C	Critical Thinking and Comp	3.00	3.00	A	12.00
MATH 3	College Algebra	3.00	3.00	A	12.00
SPAN 1B	Elementary Spanish	4.00	4.00	A	16.00
	Totals	17.00	17.00		64.00

Spring 1997 Grade Point Average: 3.76

Transcript Totals

Description	Attempted Credits	Earned Credits	Grade Points	GPA
Total Institution		64.00	64.00	3.62
Total Transfer		0.00	0.00	0.00
Overall		64.00	64.00	3.62

Prototype protocol

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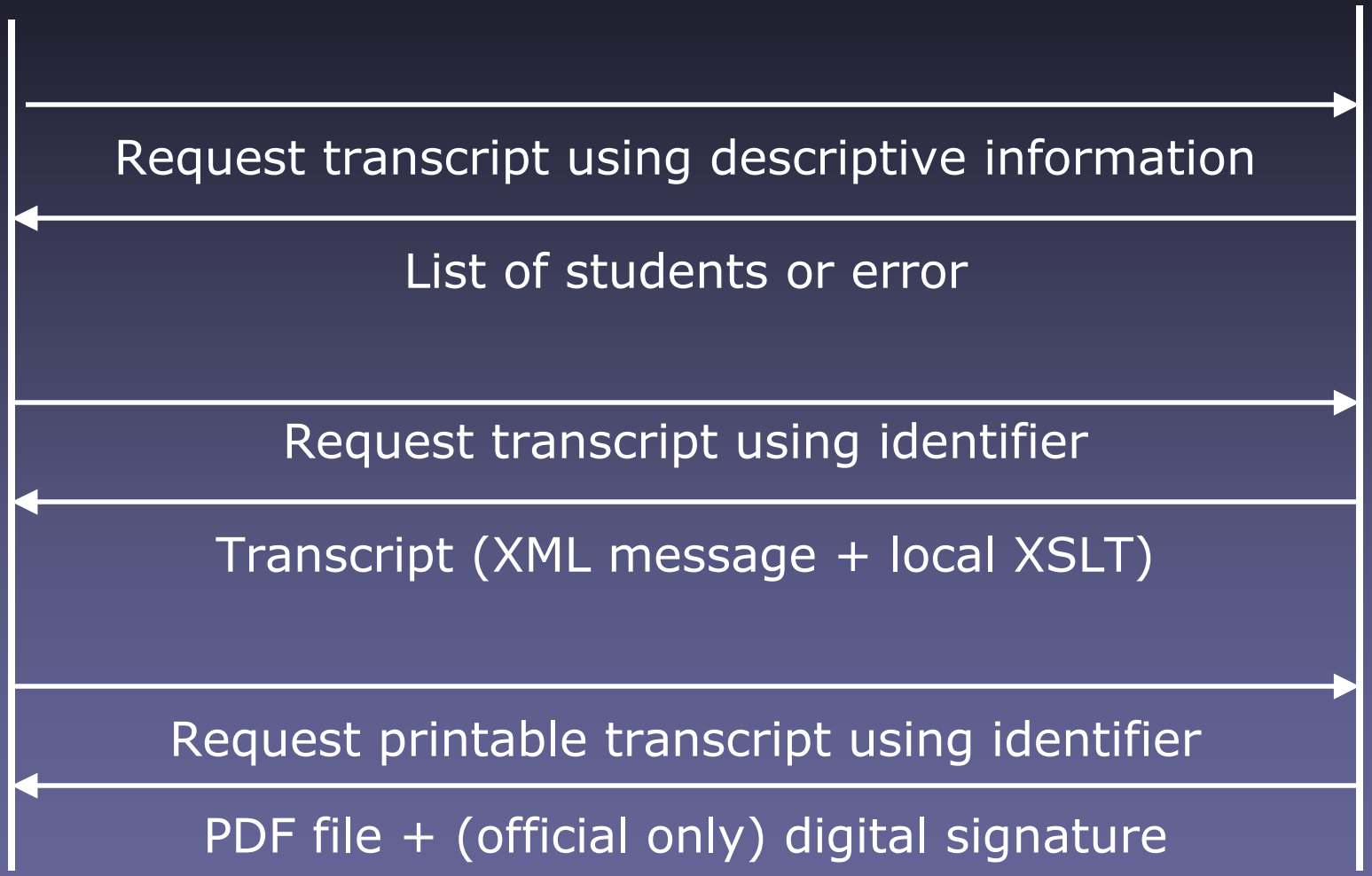

SOAP message format

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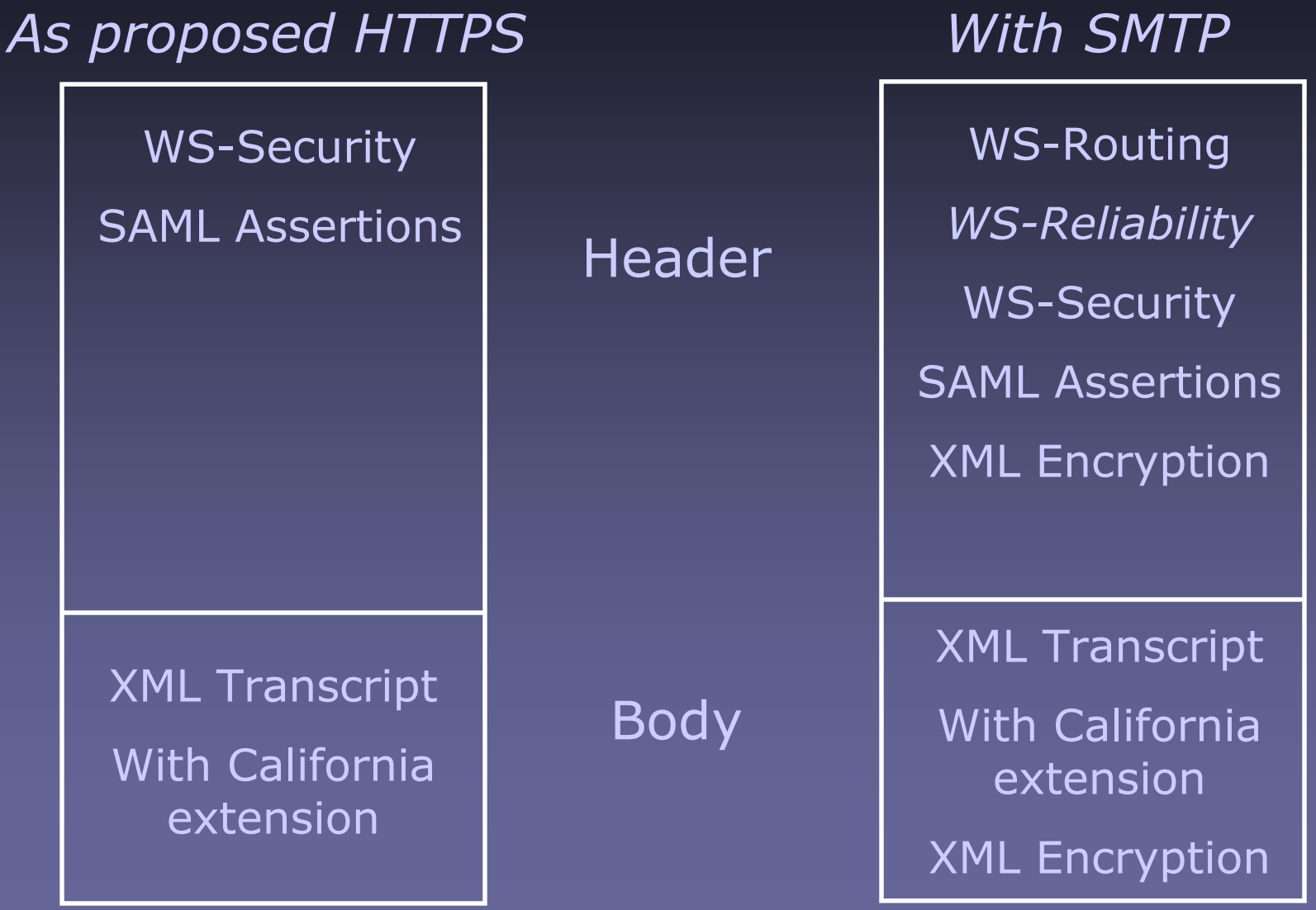

Beyond the prototype

- Field test the XML specification
- Validate business functions, protocol, user interface, and security
- Develop logging practices
- Develop minimal public key infrastructure
- *Potentially develop directory of participants (WSDL + UDDI)*
- *Develop billing/payments for transcript services*
- *Interoperate with the University of Texas, Austin Internet Server*

The Meteor Prototype

The Meteor channel

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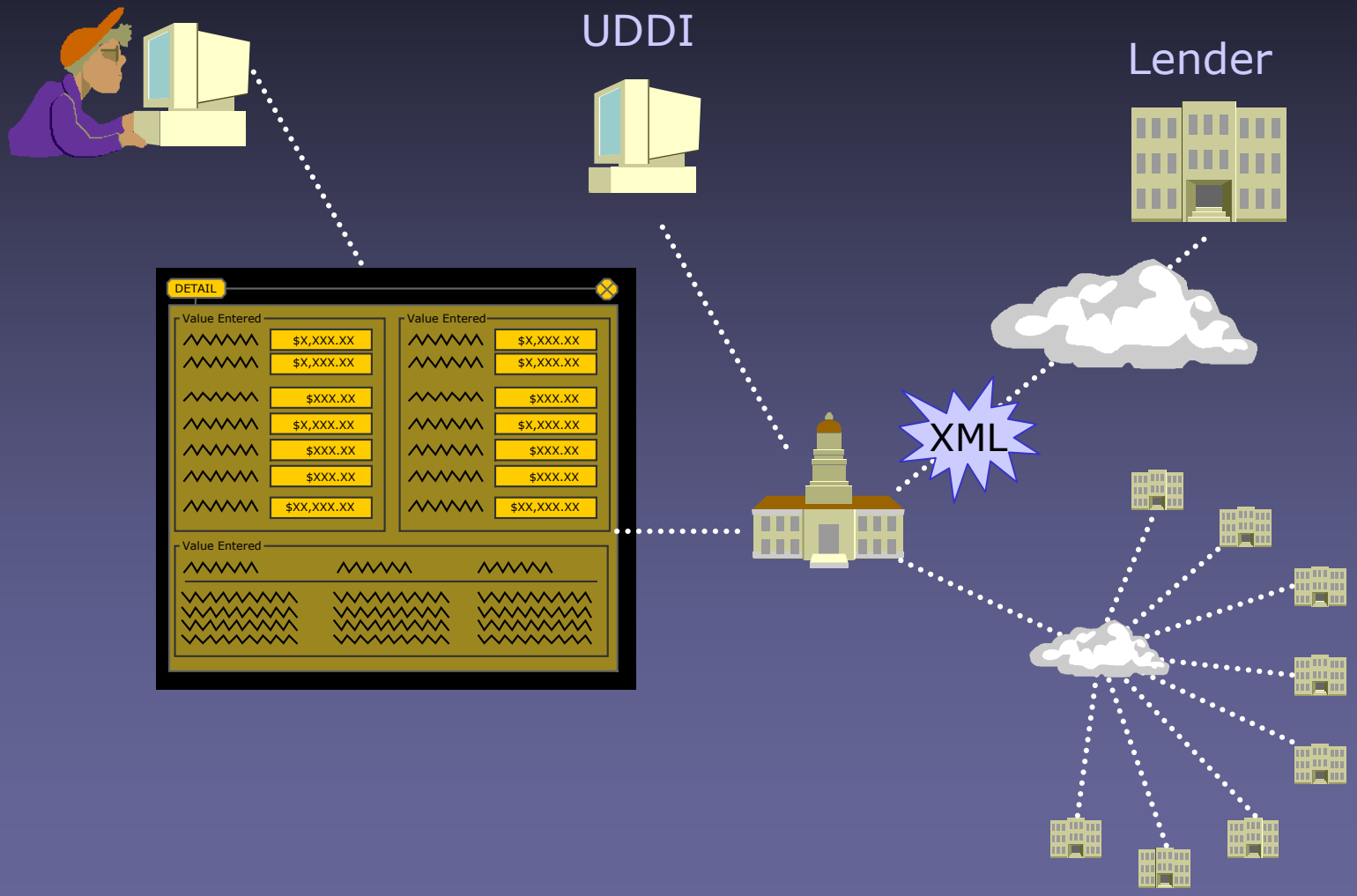
Meteor in a nutshell...



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Data from multiple sources, locations

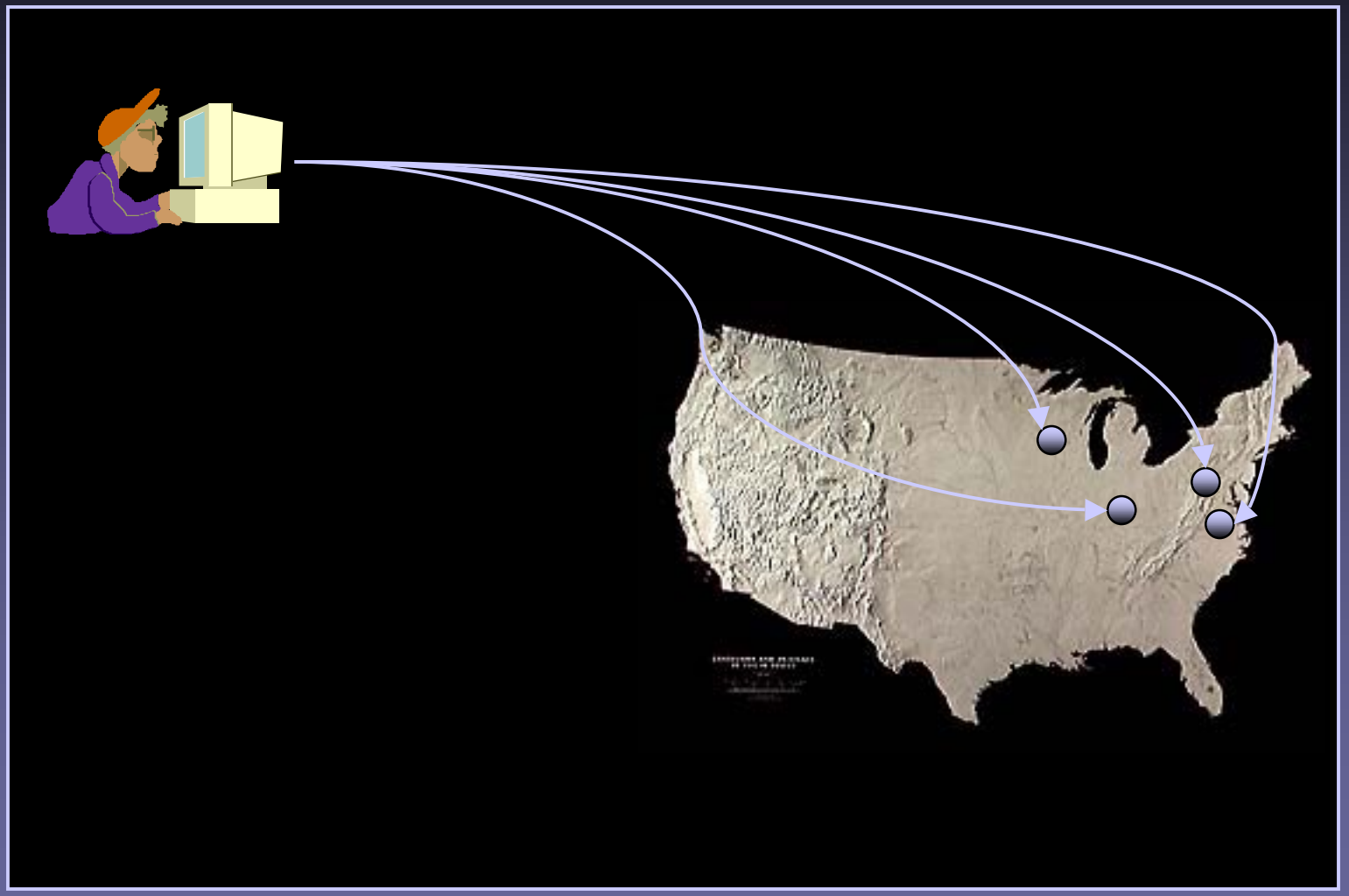

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Diagram of Meteor Concept

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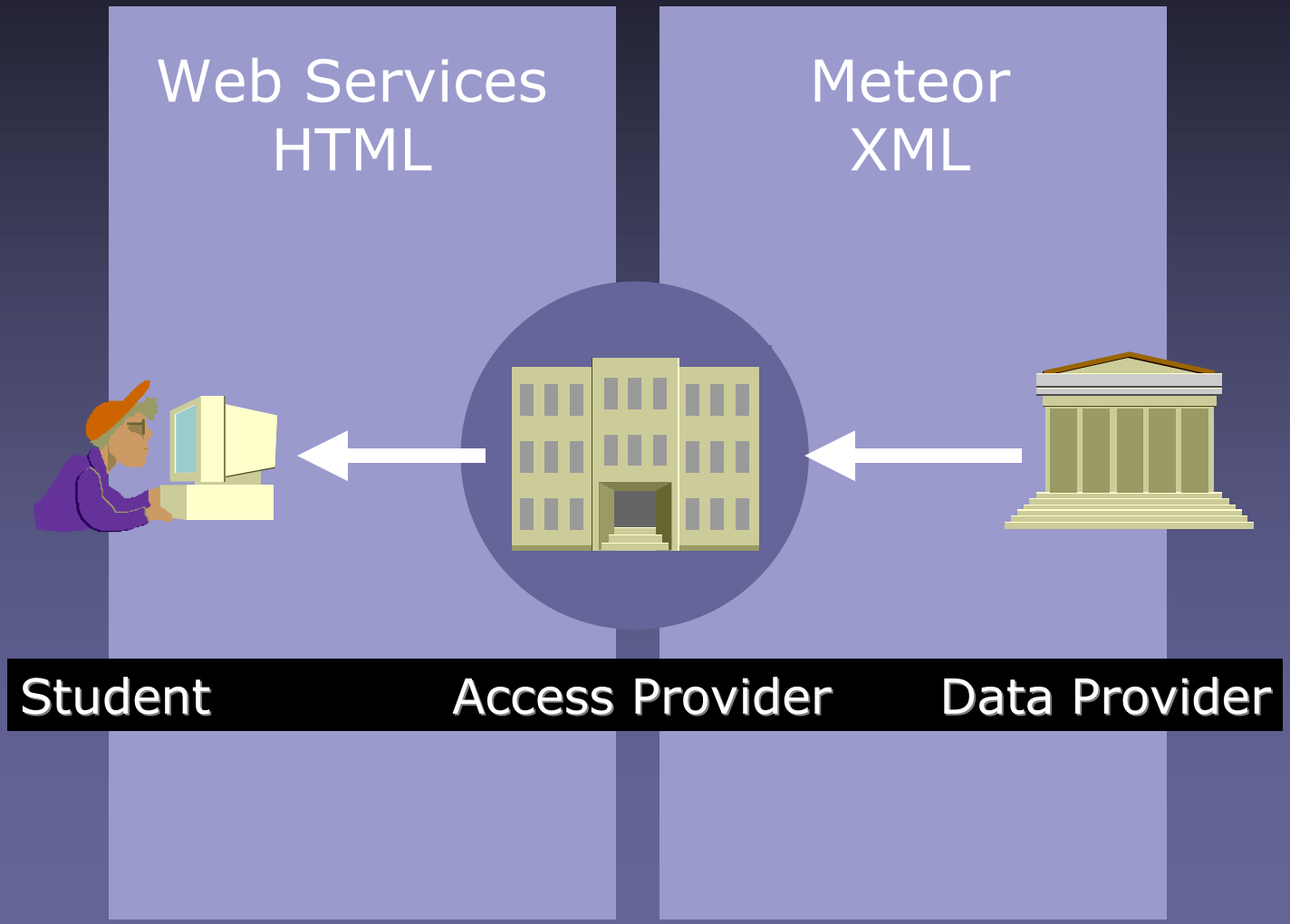

As implemented ...

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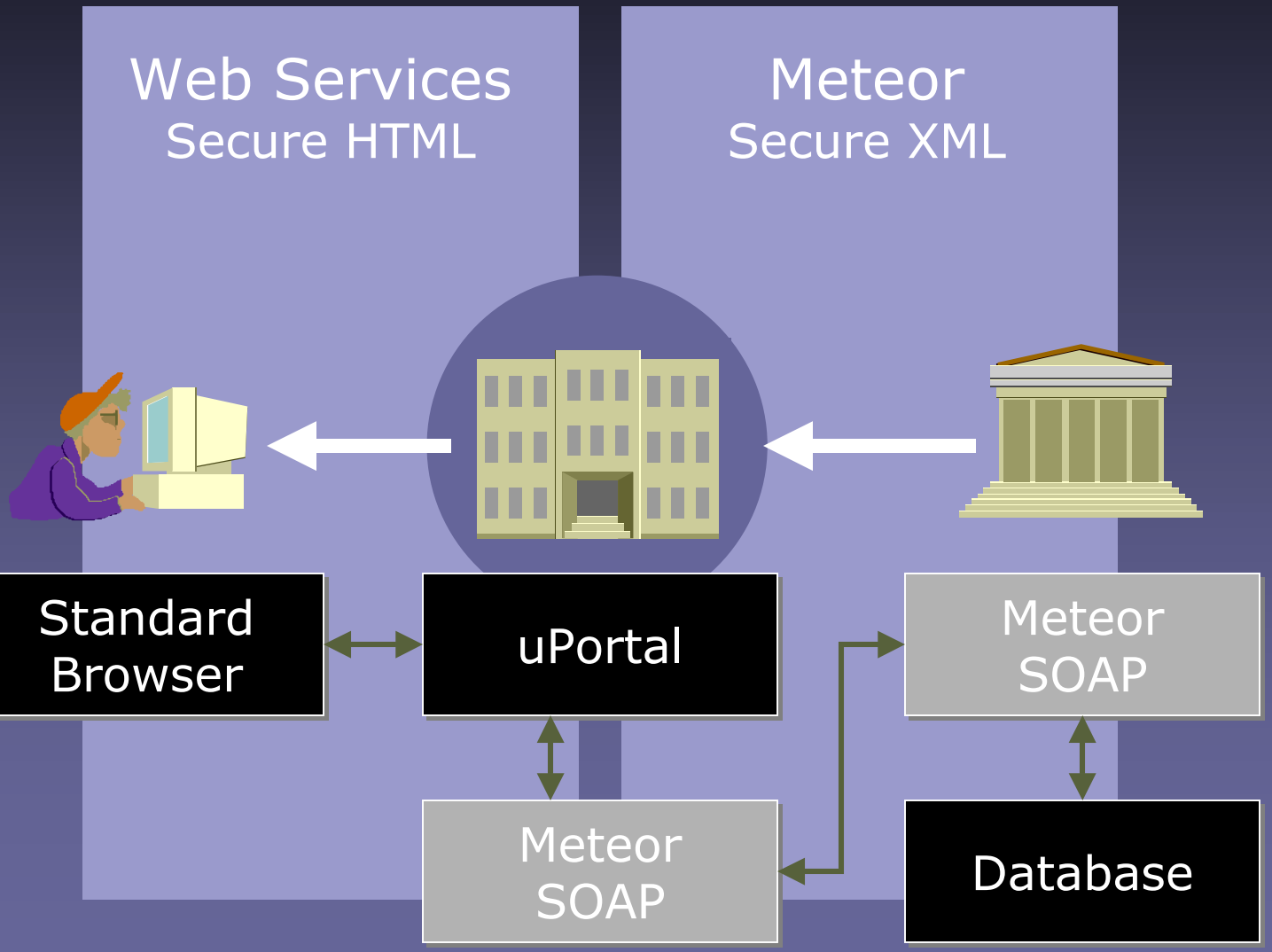

Meteor Channel in the uPortal

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Current Meteor Deployment
for financial aid professionals

Entity Details - Microsoft Internet Explorer

File Edit View Favorites Tools Help

meteor

Meteor Query

Student SSN: Submit

By submitting this inquiry to the Meteor Network, you are certifying that you are a financial aid professional (or are acting on behalf of a financial aid professional) and that you have authority to view information on the Meteor Network. You also are certifying that the information you access relates only to a student applicant, a current student, or a former student of the educational institution on whose behalf you are working. Use of the Meteor Network in violation of any of these certifications constitutes misrepresentation and will be considered a fraudulent act.

meteor

Borrower Award Summary

Borrower Name: Terry H. SwissCheese • 315-15-0315

Award Summary | Default Details | Enter New SSN

Total Guaranteed Amount:	$4,949.00
Total Repaid Principal:	$0.00
Total Capitalized Interest:	$0.00

Award Information

#	Borrower's Name	Loan Status	Award Type	Guaranteed Award Amount	Begin Date	End Date	School	Lender	Servicer	Guarantor
1	**Terry H SwissCheese**	RP	FFELPLUS	$4,949.00	1988-08-20	1989-05-21	Learning For You	Lending For You	Servicing For You	Little GA *
Total				**$4,949.00**						

* - Denotes source of data.

meteor

Award Details

Borrower Name: Terry H. SwissCheese • 315-15-0315

Award Summary | Award Details | Disbursements | Repayment Details | References | Default Details | Enter New SSN

Borrower Information

Permanent Address: 432 IOU Lane
YouBet, IA 87645-8432

Primary Phone: 501-456-8765
E-mail Address: terry_swisscheese@beoing.com

Address Validated:
Address Validated Date:

Drivers License:
Driver's License State:

Award Details

Data Provider Type: Guaranty Agency
CLUID: Not Available
Graduation Date:
Award Type: FFELPLUS
Award Amount: $4,949.00
Repaid Principal: $3,654.01
Capitalized Interest: $2,745.90
Award Begin Date: 1988-08-20
Award End Date: 1989-05-21
Grade Level: 4
Award Status: RP
Award Status Date: 1990-11-19
MPN:
E-Signature: false
CommonLine Error:
Guaranteed Date: 1988-07-07

meteor

Disbursements

Borrower Name: Terry H. SwissCheese • 315-15-0315

Award Information

Award Type	Award Amount	Begin Date	End Date	School	Lender	Servicer	Guarantor
FFELPLUS	$4,949.00	1988-08-20	1989-05-21	Learning For You	Lending For You	Servicing For You	Little GA

Disbursements

Sequence Number: 1
Disbursement Date: 1988-08-08
Net Amount: $1,920.00
Status Code: D
Status Date: 1988-08-09
Disbursement on Hold:
Sequence Number: 2
Disbursement Date: 1988-12-22
Net Amount: $1,920.00
Status Code: D
Status Date: 1986-12-23
Disbursement on Hold:

meteor

Repayment Details

Borrower Name: Terry H. SwissCheese • 315-15-0315

Award Information

Loan Status	Award Type	Award Amount	Begin Date	End Date	School	Lender	Servicer	Guarantor
RP	FFELPLUS	$4,949.00	1988-08-20	1989-05-21	Learning For You	Lending For You	Servicing For You	Little GA

Repayment Details

Loan Status Date 1990-11-19

Account Balance $565.98
Current Interest Rate 8.00%

Payment Plan
Next Payment Due $145.22

Payment Begin Date 1989-11-20
Next Payment Due Date 2002-03-15

Previous Payments

Payment Amount	Payment Date
No payments found	

Send Payments To

Servicing For You (ID: 809547)
501-458-7273
Address: 924 Servicing Way
Salt Lake City, UT 84054

Email: whatdoyouneed@sfy.com
Web: www.servicingforyou@sfy.com

meteor

References

Borrower Name: Terry H. SwissCheese • 315-15-0315

References

Uncle Bob T SwissCheese
Primary Phone: 405-209-8753
Address: 5468 HWY 90
Iowa City Hills, IA 43567
Email:

Default Details - Microsoft Internet Explorer
File Edit View Favorites Tools Help

meteor

Borrower Default Information

Borrower Name: Terry H. SwissCheese • 315-15-0315

Award Summary | Default Details | Enter New SSN

Default Details

Data Provider	Default	Satis. Payment Arrangements	Default Aversion Requested	Requested Date	Requested Cure	Requested Cure Date	Claim Filed	Claim Filed Date	Claim Paid	Claim Paid Date
Test Guarantor 1	true	false	false		false		true	1998-12-01	true	1999-01-01

Little GA (ID: 606)
Primary Phone: 501-564-8439
Address: 34 Andover Court
Salisaw, OK 75932

Email: guarantees@lga.org
Web: www.littlega.lga.org

meteor

Entity Details

Borrower Name: Terry H. SwissCheese • 315-15-0315

Award Summary

Entity Details

Little GA (ID: 606)
Primary Phone: 501-564-8439
Address: 34 Andover Court
Salisaw, OK 75932

Email: guarantees@lga.org
Web: www.littlega.lga.org

Emerging Enterprise Architecture

Enterprise Information Services

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Portal Interface

- Directory
  - Authentication
  - Authorization
- Administration (ERP)
- Virtual Learning Environment (Learning Management System)
- Library

Enterprise Information Standards

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Portal Interface

WSRP,WSUI,RSS

EduPerson, HR-XML

Directory

Authentication

Authorization

DSML

SAML

Administration (ERP)

HR-XML, PESC

Virtual Learning Environment (Learning Management System)

IMS

Library

NISO

XML/SOAP/XSLT Architecture

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- The XML content is delivered to the portal as a SOAP message
- and portal-based XSL stylesheet transformations are used to develop the XHTML used for presentation.

  The user's role can be used by the portlet (channel) to select the appropriate XSLT and presentation for that class of user.

Application/Portal Interface

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	Technology	Presentation	Processing
SOAP/XSLT	Web Services	Local adaption	Application Server
WSRP	Web Services	As authored w/local style	Application Server
HTML	HTML via CWebProxy	Similar to authored	Web Server
iChannel	Java	As authored	Portal

Comparative Characteristics

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	Presentation						
	Flexibility	Languages	Localization	Control	Legacy Web Compatibility	Portal Load	Portal Code
SOAP/XSLT	√	√	√			Low	Stylesheets
WSRP				√		Low	None
HTML via CWebProxy					√	Depends	CWebProxy
iChannel				√		High	Application+ Stylesheets?

Preferred Interface

Technology	Typical Use
SOAP/XSLT	Preferred for new applications
WSRP	New applications where portal installation of code or stylesheet is not possible or desirable
HTML	For legacy applications
iChannel	When the application must run under the portal or requires capability not available in WSRP or SOAP/XSLT

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Managed Learning Environment

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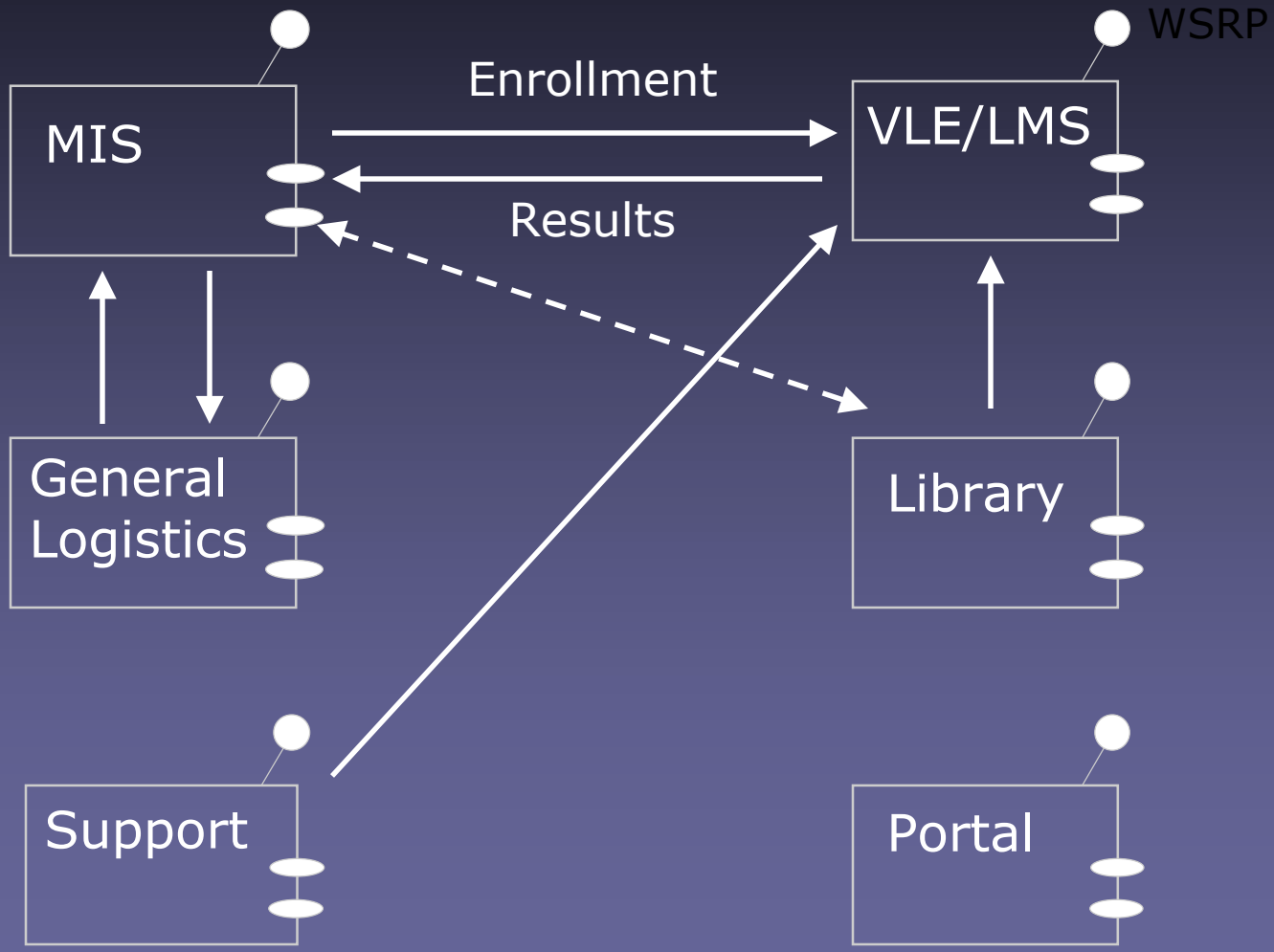

Scott Wilson, Joint Information Systems Council, 18 Nov 2002

Data Integration Standards

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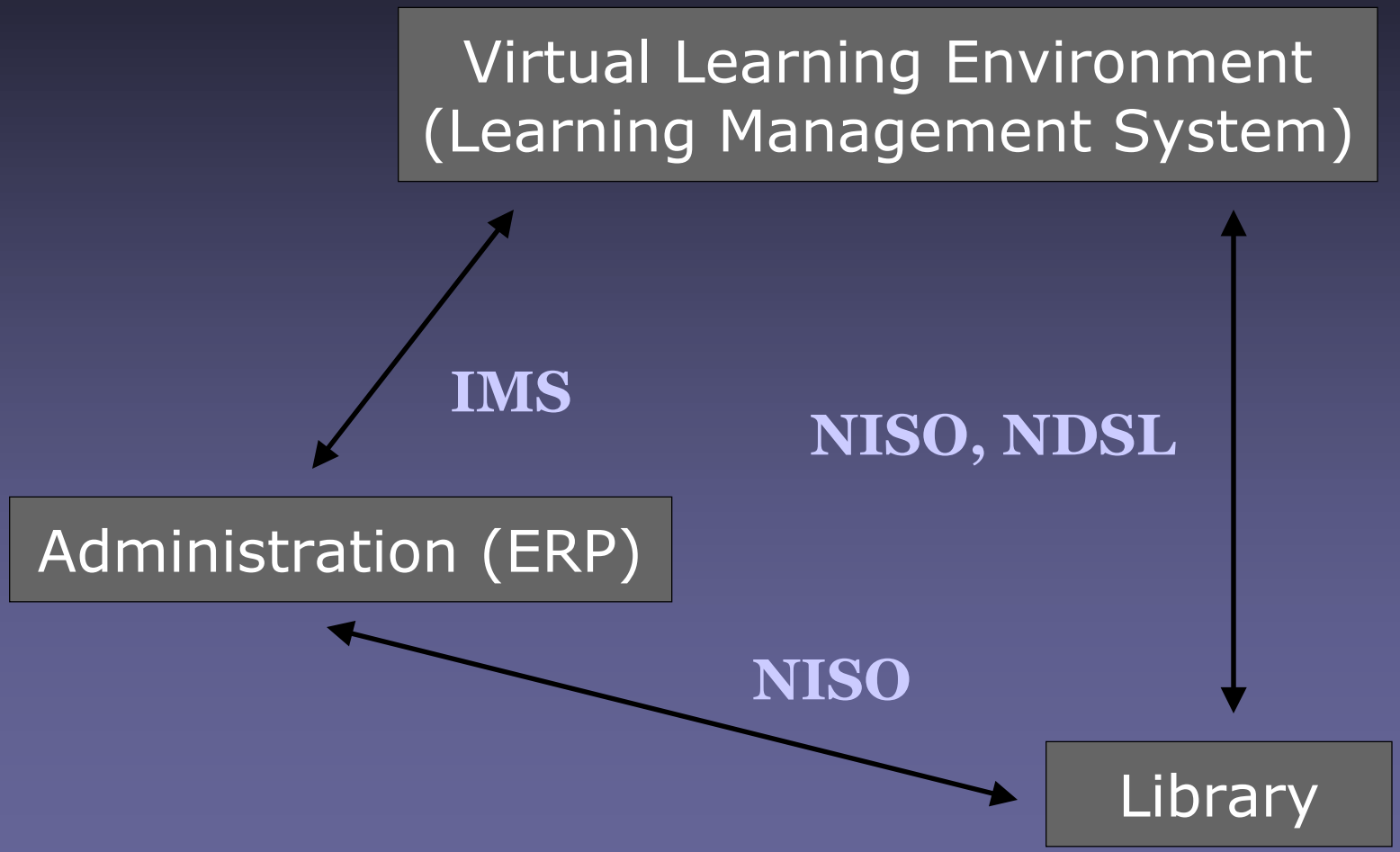
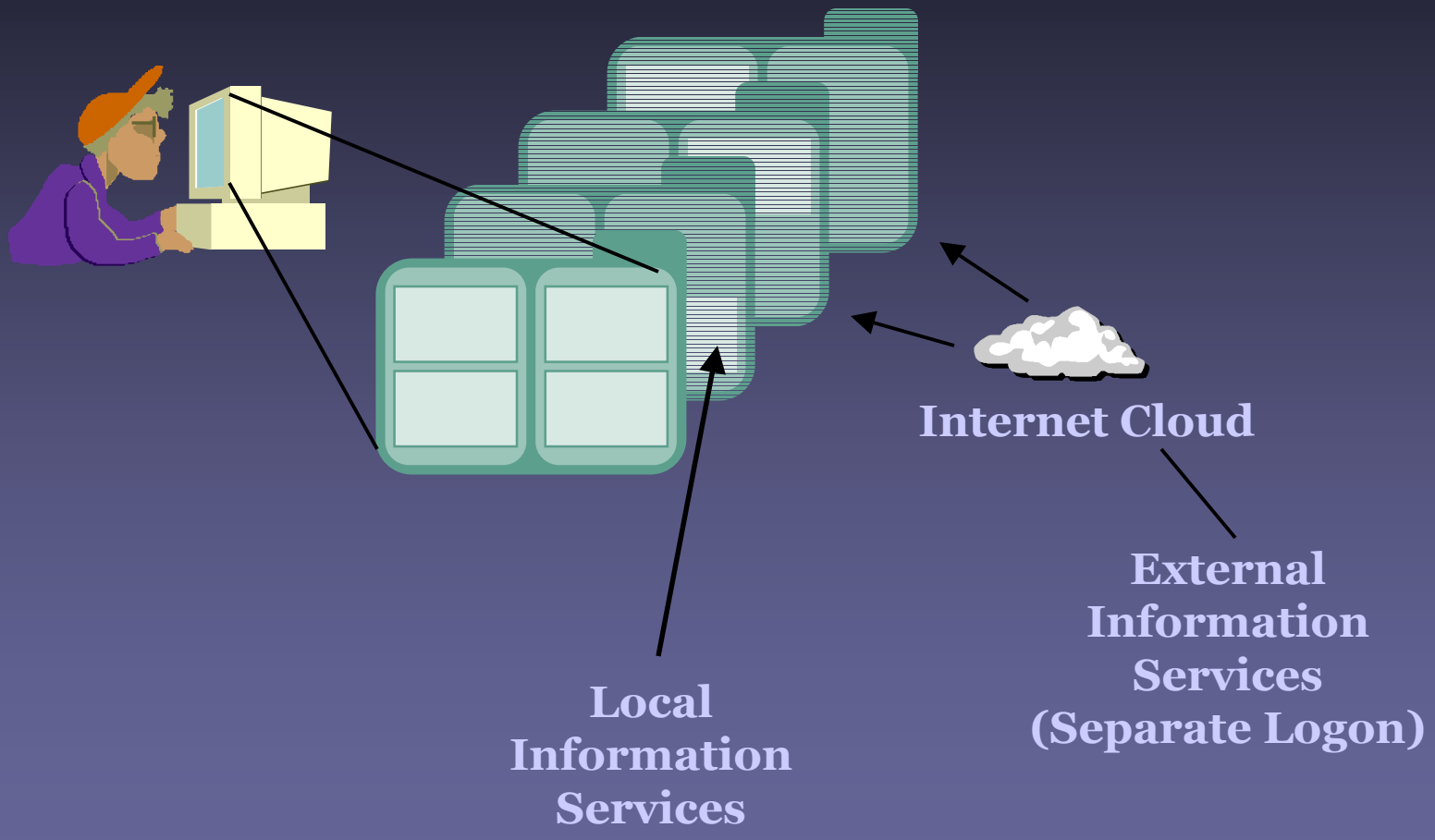


The portal view



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Digital repositories

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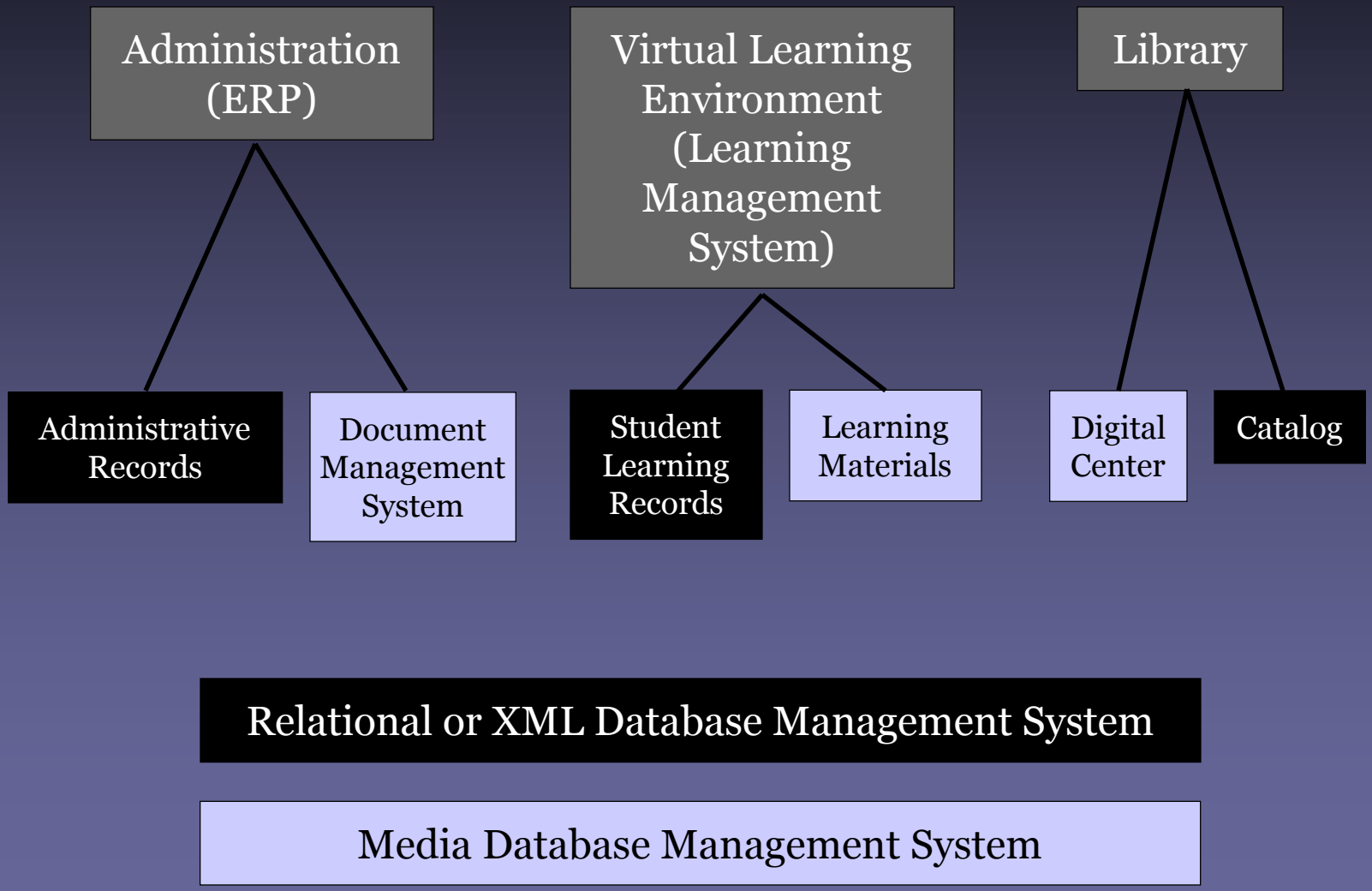

Observations

Higher Education IT: Context

- IT budgets typically reduced 10 to 20% for the second consecutive year.
- Sharp increases in software licenses
- Three new federally mandated systems using different architectures.
- Increasingly heterogeneous hardware/software
- Student expectations driving priorities: portals, wireless, broadband, on-line administrative systems

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Directory standards

- EDUCAUSE EduPerson Objects + "Best practices" representations
- Explicit in OASIS xNAL, xAL, xCIL, xCRL
- Implicit in Common Record, SEVIS, Meteor, and CommonLine; PESC transcript and admissions
- Explicit in HR-XML (implementation confirmed by key ERP vendors)
- Implicit in IMS Enterprise
- Implicit in SIF (K-12)

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Use of SAML Assertions

- Internet 2 Shibboleth (journal access)
- Meteor (student loan data)
- eTranscript (student records)
- Liberty Alliance (federated authentication)

Shouldn’t the assertions be standardized for higher education?

SAML Assertion

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```
<?xml version="1.0" ?>
- <SAML>
    <AssertionID>AE0221</AssertionID>
    <Issuer>URN:dns-date:www.CREN.test:2002-05-16:19283</Issuer>
  - <ValidityInterval>
      <NotBefore>2002-05-16T12:34:00Z</NotBefore>
      <NotOnOrAfter>2002-05-16T13:34:00Z</NotOnOrAfter>
    </ValidityInterval>
  - <Conditions>
      <Audience>http://www.CREN.test/school_list.html</Audience>
    </Conditions>
  - <Subject>
      <Account>K4356783</Account>
    </Subject>
  - <Resources>
      <string>http://www.elseviser.com/Journal_X/</string>
      <string>https://www.Alpha College.edu/SIS/</string>
    </Resources>
</SAML>
```

Implementation of PKI

- Use CREN policies and practices, certificate profile for higher education
- Begin with server certificates (HTTPS using IETF TLS/1)
- Use client certificates for offices to sign documents (XML Signature)
- When there is a need, provide digital certificates to students

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Certificate Validation: XKMS

- The X-KISS specification defines a protocol for a *Trust service* that resolves public key information contained in XML-SIG elements. … The underlying PKI may be based upon … X.509/PKIX, SPKI or PGP.
- The X-KRSS specification defines a protocol for a web service that accepts registration of public key information.
- Both protocols are defined in terms of
  - XML Schema Language
  - (SOAP) v1.1
  - Web Services Definition Language v1.0 [WSDL].

XML Key Management Specification (XKMS 2.0),
W3C Working Draft, March 18, 2002.

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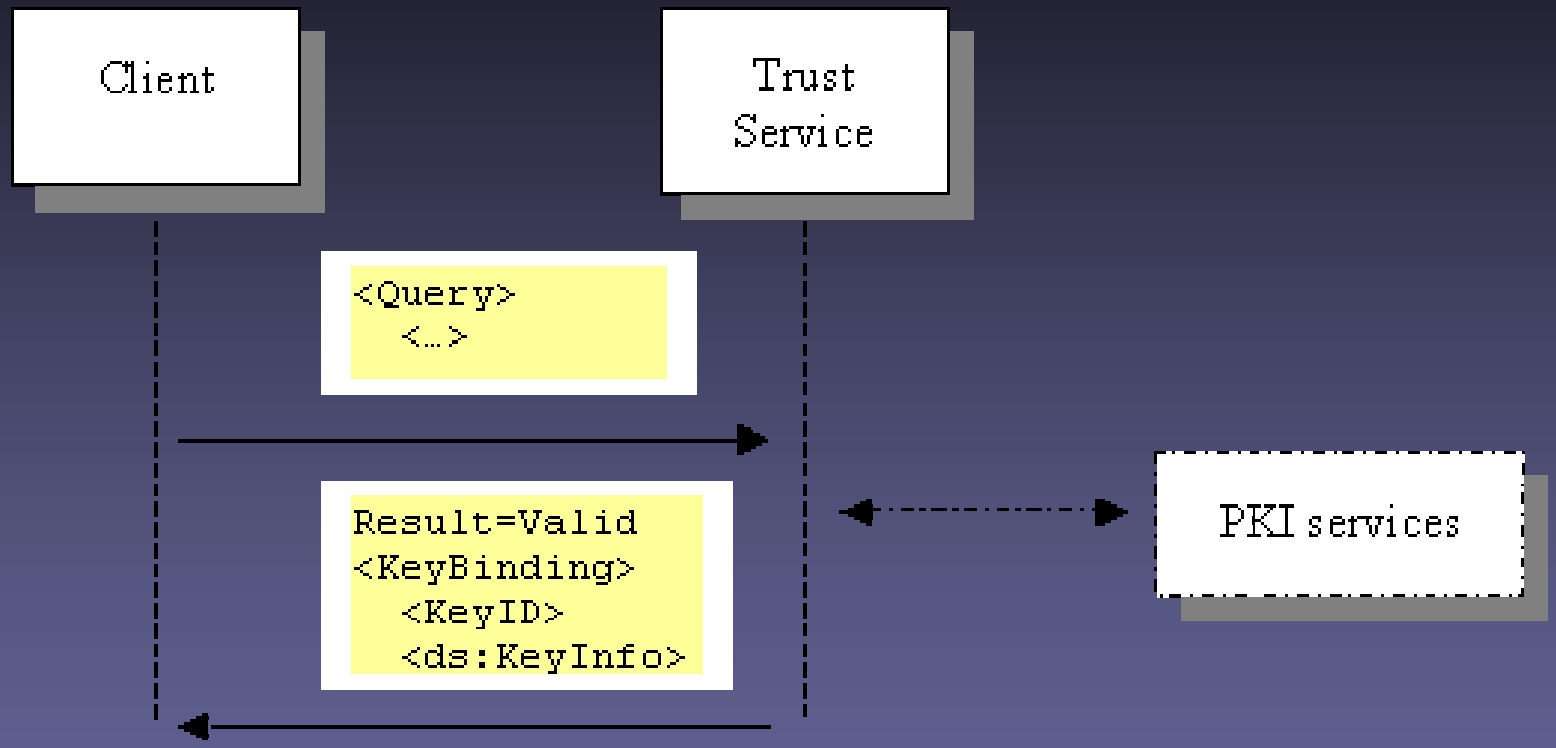
XKMS Key Validation



Tier2 Protocol Provides Key Validation Service

XML Key Management Specification (XKMS 2.0),
W3C Working Draft, March 18, 2002

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The dilemma

- Software developers are isolated from standards efforts.
- There are so many standards; overlap is occurring, the volume of standards documentation exceeds staff capacity to review and use.
- Because of location and priorities, those *implementing* data exchange standards do not have the opportunity to work together.

Summary

- To accommodate .NET and Java communities, Web Services is required for inter-institutional, inter-system communication
- The Web-services standards are now sufficient for implementation.
- Higher education data standards are available for admissions applications, transcripts, and test scores.
- eTranscripts has a tradition of electronic exchanges and infrastructure (University of Texas Internet server)
- The eTranscript application has an immediate return on investment.

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Challenge

- The value (volume) of exchanges will increase if the current initiatives can converge on a single standard.
- The implementations must have a common protocol and common standard though additional data can be exchanged between trading partners (e.g. state extensions).
- The challenge:
  - Converged standard
  - Interoperability testing

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One approach

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- Working groups of developers and implementers
- supplemented by advisors familiar with the standards
- with effective communications
- open to all who are interested
- and with opportunities for interoperability testing.

Why eTranscripts?

- Desire of participants to collaborate
- Experience in exchanging complex data
- Return on investment, especially as demand for academic records increases

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The End

Jim Farmer
uPortal Project Administrator
jxf@immagic.com